Meeting Agenda

Technical Panel
Tuesday, December 9, 2014 at 9:00am
NET Boardroom
Nebraska Educational Telecommunications
1800 N. 33rd St.
Lincoln, NE

Meeting Documents
Meeting Documents - Including Full Text of Projects

9:00am	1. Roll Call, Meeting Notice & Open Meetings Act Information 2. Public Comment 3. Approval of Minutes* - October 14, 2014	Chair
9:05am	4. Project Proposals - 2015-2017 Biennial Budget - Supplemental Reviews* a. Approval of New Reviewer* b. Project summary sheets c. Full text of the projects (173 pages)	R. Becker
9:25am	5. Enterprise Projects a. Project Status Dashboard b. Project Update 1. DHHS - Medicaid Eligibility & Enrollment System (Eric Henrichsen)	A. Weekly
9:45am	6. Standards and Guidelines a. Recommendations to the NITC 1. NITC 3-205: Street Centerline Standards (New)* - Two Comments - GIS Council Comments 2. NITC 3-206: Address Standards (New)* - One Comment - GIS Council Comments b. Requests for Waiver 1. Department of Economic Development - Request for Waiver from the requirements of NITC 7-104* 2. Nebraska Wheat Board - Request for Waiver from the requirements of NITC 7-104*	R. Becker
10:05am	7. Election - Technical Panel Chair for 2015*	Chair

10:10am	8.	Work Group Updates and Other Business	Chair
10:15am	9.	Adjourn (Next Meeting - February 10, 2015)	Chair

* Denotes action items

The Technical Panel will attempt to adhere to the sequence of the published agenda, but reserves the right to adjust the order of items if necessary and may elect to take action on any of the items listed.

Meeting notice was posted to the NITC website and Nebraska Public Meeting Calendar on November 7, 2014. The agenda was posted to the NITC website on December 7, 2014. Nebraska Open Meetings Act

TECHNICAL PANEL
Tuesday, October 14, 2014 at 9:00 a.m.
Varner Hall - Board Room
3835 Holdrege Street
Lincoln, NE
MINUTES

MEMBERS PRESENT:
Brenda Decker, CIO, State of Nebraska
Christy Horn, University of Nebraska
Kirk Langer, Lincoln Public Schools
Don Mihulka, University of Nebraska
Mike Winkle, Nebraska Educational Telecommunications

MEMBERS ABSENT: None

ROLL CALL, MEETING NOTICE & OPEN MEETINGS ACT INFORMATION

Mr. Winkle called the meeting to order at 9:05 a.m. A quorum was present to conduct official business. Meeting notice was posted to the NITC website and Nebraska Public Meeting Calendar on September 16, 2014. The agenda was posted to the NITC website on October 10, 2014 and revised on October 12, 2014. A copy of the Nebraska Open Meetings Act was posted on the south wall.

PUBLIC COMMENT

There was no public comment.

APPROVAL OF MINUTES*

Mr. Langer moved to approve the September 9, 2014 minutes as presented. Mr. Mihulka seconded. Roll call vote: Langer-Yes, Mihulka-Yes, and Winkle-Yes. Results: Yes-3, No-0, Abstained-0. Motion carried.

Ms. Decker arrived and presided over the rest of the meeting.

STANDARDS AND GUIDELINES

Requests for Waiver

Game and Parks Commission - Request for Waiver from the requirements of NITC 7-104*
Toni Knust, IT Manager and Christy Rasmussen, Communications Coordinator

The agency is requesting a waiver due to the advertising displayed on the agency website. The commissioner uses OutdoorNebraska.gov as the official agency URL. The advertising supports the agencies partnerships with retail organizations, non-governmental agencies and conservation groups to promote outdoor recreation activities and tourism in Nebraska.

Mr. Winkle moved to approve the Nebraska Game and Parks Commission's request for waiver from the requirements of NITC 7-104 Web Domain Name standard. Mr. Langer seconded. Roll call vote: Decker-Yes, Langer-Yes, Mihulka-Yes, and Winkle-Yes. Results: Yes-4, No-0, Abstained-0. Motion carried.

Department of Health and Human Services – Three (3) Requests for Waivers
Eric Heinrichsen, Department of Health and Human Services, was available for questions.

Waiver from NITC 8-302 for DHHS Vital Records System. The Vital Records System that tracks birth, death, marriage and divorce events for DHHS is currently available in Citrix to approximately 3000 internal/external users. The users are authenticated via the DHHS Active Directory. Vital Records System will be migrating to a new web-based version of software by July 2015. Testing on the application will begin in October/November 2014. The new web-based application will be using the DHHS Active Directory for authentication. All 3000 internal/external users are currently defined in the DHHS Active Directory. Initial setup/movement of users in the Nebraska Directory Services would be very time consuming and may potentially cause the user ids to change. Chris Hobbs, State Information Security Officer, recommended approval of the waiver.

Mr. Langer moved to approve the request for waiver from NITC 8-302. Mr. Winkle seconded. Roll call vote: Winkle-Yes, Mihulka-Yes, Langer-Yes, and Decker-Yes. Results: Yes-4, No-0, Abstained-0. Motion carried.

Waiver from NITC 8-302 for MIP (Medicaid Incentive Payments). DHHS is using a vendor to provide a solution for the administration of MIP. The vendor is performing services and hosting the solution externally in a corporate data center. It is targeted to go live October 6.

After discussion, it was agreed that no waiver was needed. This is a hosted application which is outside the scope of the standard.

Waiver from NITC 8-302 and NITC 8-301 for the Edifecs System. DHHS has procured a new system, Edifecs, to act as a real time HTTP/S compatible translator working with the existing Sybase HIPAA Translator system. DHHS is requesting waivers to both standards for this system. Mr. Hobbs, State Information Security Officer, recommended approval of the waiver for the password standard.

After discussion, it was agreed that no waiver was needed for NITC 8-302. This is outside the scope of that standard.

Mr. Winkle moved to approve the request for waiver from NITC 8-301 Password standard until July 1, 2016. Mr. Langer seconded. Roll call vote: Langer-Yes, Mihulka-Yes, Winkle-Yes, and Decker-Yes. Results: Yes-4, No-0, Abstained-0. Motion carried.

ENTERPRISE PROJECTS
Andy Weekly, Office of the CIO, Project Manager

Project Status Dashboard. Mr. Weekly reviewed the dashboard report.

Administrative Services - LINK - Procurement. This project has been suspended.

Mr. Winkle moved to suspend the project reporting requirements for the LINK-Procurement project until the agency resumes activity on the project. Mr. Langer seconded. Roll call vote: Winkle-Yes, Mihulka-Yes, Langer-Yes, and Decker-Yes: Yes-4, No-0, Abstained-0. Motion carried.

Project Closures

Office of the CIO - Nebraska Statewide Radio System

Mr. Winkle moved to recommend closure of the Nebraska Statewide Radio System project. Mr. Langer seconded. Roll call vote: Decker-Yes, Langer-Yes, Winkle-Yes, and Mihulka-Yes. Results: Yes-4, No-0, Abstained-0. Motion carried.

University of Nebraska and State College System - NeSIS ADA Compliance (Voluntary Review)*. The project has submitted a final report. The project acknowledged that accessibility issues need to be addressed on an ongoing basis.

Mr. Winkle moved to close the NeSIS ADA Compliance project as a voluntary review project. Mr. Langer seconded. Roll call vote: Mihulka-Yes, Winkle-Yes, Decker-Yes, and Langer-Yes. Results: Yes-4, No-0, Abstained-0. Motion carried.

Christy Horn arrived to the meeting.

Project Designation

DHHS - Medicaid Eligibility & Enrollment System
Eric Henrichsen, Department of Health and Human Services

In November 2012, Nebraska elected to use the Federal Insurance Exchange model. DHHS planned implementation phases as follows:

- Phase 1 – Use N-FOCUS and current technologies to get minimal functionality available for 10/2013. Separation of CFS/MLTC within N-FOCUS. Reduce work queue backlog.
- Phase 2 – RFP for Long-Term solution meeting CMS 7 Standards and Conditions.

The RFP has been developed and released with the following scope and timelines.
Scope

- Software and system integrations for EES functionality
- Platform for Service Oriented Architecture
- Rules Engine, Work Flow, Enterprise Service Bus
- Software available for other programs within DHHS
- Integrate with existing Onbase (ECM), IVR, Workforce Management/Optimization
- Provide initial hosting, State option to move to another vendor or bring into OCIO data center in the future

Timeline

- RFP Posted 10/31/2013
- Bids opened 1/21/2014 - Infosys, Engagepoint, Unisys, Accenture, Wipro, MariChris
- Orals 2/20/2014 – 2/28/2014 – Unisys, Accenture, Wipro
- Intent to Award 3/19/2014 – Wipro (IBM/Curam sub-contractor for software/hardware)
- Contract Finalized 7/23/2014

Questions and discussion followed.

Mr. Winkle moved to recommend that the Medicaid Eligibility and Enrollment System project be designated as an Enterprise Project. Mr. Langer seconded. Roll call vote: Decker-Yes, Horn-Yes, Langer-Yes, Mihulka-Yes, and Winkle-Yes. Results: Yes-5, No-0, Abstained-0. Motion carried.

STANDARDS AND GUIDELINES - RECOMMENDATIONS TO THE NITC

These standards document were posted for the 30-day comment period.

No comments were received for NITC 3-201, NITC 3-203 and NITC 3-204.

Ms. Horn moved to recommend approval of NITC 3-201: Geospatial Metadata Standard (Amendment), NITC 3-203: Elevation Acquisition using LiDAR Standards (New), and NITC 3-204: Imagery Standards (New). Mr. Winkle seconded. Roll call vote: Horn-Yes, Langer-Yes, Mihulka-Yes, Winkle-Yes, and Decker-Yes. Results: Yes-5, No-0, Abstained-0. Motion carried.

The GIS Council is reviewing the public comments submitted for NITC 3-205 and NITC 3-206. Staff recommends tabling these documents until the next Technical Panel meeting.

Mr. Winkle moved to table NITC 3-205: Street Centerline Standards (New) and NITC 3-206: Address Standards (New) until the next meeting. Mr. Langer seconded. Roll call vote: Mihulka-Yes,

Langer-Yes, Horn-Yes, Decker-Yes, and Winkle-Yes. Results: Yes-5, No-0, Abstained-0. Motion carried.

No comments were received for NITC 7-104.

Ms. Horn moved to recommend approval of NITC 7-104: Web Domain Name Standard (Amendment). Mr. Winkle seconded. Roll call vote: Horn-Yes, Langer-Yes, Mihulka-Yes, Winkle-Yes, and Decker-Yes. Results: Yes-5, No-0, Abstained-0. Motion carried.

PROJECT PROPOSALS - 2015-2017 BIENNIAL BUDGET - RECOMMENDATIONS TO THE NITC* (**Project summary sheets** and **Full text of the projects)**

The members reviewed each of the projects. The following individuals were available to discuss their agency's projects: Colleen Byelick and Chad Sump, Secretary of State; Dale Fangmeier, Department of Agriculture; and Pearl Van Zandt and other staff, Commission for the Blind and Visually Impaired.

Through discussion and by consensus, the panel made the following comments on the projects:

Project	Q1	Q2	Q3	Comment
09-01	✓	UNK	UNK	Unknown until the RFP process is completed.
09-02	✓	✓	✓	
18-01	✓	✓	✓	
24-01	✓	UNK	UNK	Unknown until the RFP process is completed.
40-01	UNK	UNK	UNK	Insufficient information in the proposal to evaluate the technical elements.
41-01	✓	UNK	UNK	Unknown until the RFP process is completed.
81-01	✓	UNK	UNK	Unknown technical elements, specifically related to connections to other agencies.

Q1: Is the project technically feasible?
Q2: Is the proposed technology appropriate for the project?
Q3: Can the technical elements be accomplished within the proposed timeframe and budget?
✓=Yes; ×=No; UNK=Unknown

Mr. Winkle moved to forward the Technical Panel's review and comments on the project proposals to the NITC. Mr. Langer seconded. Roll call vote: Decker-Yes, Horn-Yes, Langer-Yes, Milhulka-Yes, and Winkle-Yes. Results: Yes-5, No-0, Abstained-0. Motion carried.

WORK GROUP UPDATES AND OTHER BUSINESS

There were no work group reports.

ADJOURNMENT AND NEXT MEETING

The next meeting of the NITC Technical Panel will be held on Tuesday, December 9, 2014 at 9 a.m.

Mr. Langer moved to adjourn. Mr. Winkle seconded. All were in favor. Motion carried.

The meeting was adjourned at 10:35 a.m.

Meeting minutes were taken by Lori Lopez Urdiales and reviewed by Rick Becker of the Office of the CIO.

Technical Panel
of the
Nebraska Information Technology Commission

Project Reviewer Information Sheet

Purpose: By statute, the Technical Panel of the Nebraska Information Technology Commission is responsible for performing technical reviews of certain budget requests and grant applications. As part of the review process established in NITC policies (NITC 1-202), the Technical Panel may request qualified individuals to review, score, and comment on project proposals as part of the technical review process. This document requests background information from potential reviewers allowing the Technical Panel to document a reviewer's qualifications. Please send the completed form to: ocio.nitc@nebraska.gov

Name	Tod Wyrick
Agency/Employer	OCIO
Title	IT Supervisor
Email Address	Tod.Wyrick@Nebraska.gov
Phone	402-471-8069

1. Employment History (IT Related Only)
   State of Nebraska – OCIO – June 1997 to Present

2. Education
   University of Kansas, BA Psychology 1992
   Southeast Community College, Associate's Degree Computer Programming Technology 1997

3. Professional Training and Certifications
   Java Jumpstart – IBM
   Project Management Methodologies

4. Information Technology Areas of Expertise (Optional. List areas of expertise.)
   Web Development
   Project Management
   Team Building

Date	
Action	

Project #	Agency	Project Title
13-01	Department of Education	Nebraska eLearning Project

SUMMARY OF REQUEST (Executive Summary from the Proposal)

[Full text of all proposals are posted at: http://nitc.nebraska.gov/commission/project_proposals/2015-2017.html]

The Nebraska eLearning Project would center on the creation and procurement of high quality electronic learning objects for distribution to PreK-12 public schools at no cost to schools, in support of the statewide BlendEd Initiative, the NITC committee's digital education goals and as an enhancement to the Data Dashboard currently being developed by NDE, while providing an in-depth, hands-on professional development process for Nebraska teachers, pre-service teachers and content specific undergraduate students.

FUNDING SUMMARY

	Estimated Prior Expended	Request for FY2016 (Year 1)	Request for FY2017 (Year 2)	Request for FY2018 (Year 3)	Request for FY2019 (Year 4)	Future	Total
1. Personnel Costs		$ 88,000.00	$ 90,000.00	$ 92,000.00	$ 94,000.00		$ 364,000.00
2. Contractual Services							
2.1 Design							$ -
2.2 Programming							$ -
2.3 Project Management							$ -
2.4 Other							$ -
3. Supplies and Materials							$ -
4. Telecommunications							$ -
5. Training							$ -
6. Travel							$ -
7. Other Operating Costs		$ 2,500,000.00	$ 2,500,000.00	$ 2,500,000.00	$ 2,500,000.00		$ 10,000,000.00
8. Capital Expenditures							
8.1 Hardware							$ -
8.2 Software							$ -
8.3 Network							$ -
8.4 Other							$ -
TOTAL COSTS	$ -	$ 2,588,000.00	$ 2,590,000.00	$ 2,592,000.00	$ 2,594,000.00	$ -	$ 10,364,000.00
General Funds		$ 2,607,000.00	$ 2,607,000.00	$ 2,607,000.00	$ 2,607,000.00		$ 10,428,000.00
Cash Funds							$ -
Federal Funds							$ -
Revolving Funds							$ -
Other Funds							$ -
TOTAL FUNDS	$ -	$ 2,607,000.00	$ 2,607,000.00	$ 2,607,000.00	$ 2,607,000.00	$ -	$ 10,428,000.00

PROJECT SCORE

Section	Reviewer 1	Reviewer 2	Reviewer 3	**Mean**	Maximum Possible
Goals, Objectives, and Projected Outcomes	9	12	7	9	15
Project Justification / Business Case	15	17	18	17	25
Technical Impact	5	14	2	7	20
Preliminary Plan for Implementation	5	7	6	6	10
Risk Assessment	5	7	6	6	10
Financial Analysis and Budget	10	14	13	12	20
			TOTAL	**57**	100

REVIEWER COMMENTS

Section	Strengths	Weaknesses
Goals, Objectives, and Projected Outcomes	- The project overview provides some specific and, ultimately, measurable goals in the form of project deliverables. The project outcomes are desirable within the larger context of what is needed to assist K12 schools moving forward with a digital conversion. - Vision: State-wide LOR System with Open Content with content that supports NE Ed needs. - Goals are laudable, but I question the need for	- The evaluation plan is sketchy beyond the specific deliverables and some mention of working with Brightbytes. Goals, partners and measures of success are loosely correlated without necessary specifics to tie them together. - Cost Savings not specified. Can IRR/ROI be determined? - Metrics are provided, but vague. What does successful mean? Better metrics might be LOR

Section	Strengths	Weaknesses
	yet another LOR just to have one special for Nebraska. Many LORs are already started, could we not work with someone who has begun this work already?	has X number of learning objects available for faculty use in year 1, Y number in year 2, etc.
Project Justification / Business Case	- Components of the project are consistent with desired outcomes and stated project goals. Components of the project do provide an indication of the process for development, implementation/adoption, and technical integration. - Content creation teams config for K-6 projects and Fellowship program - Adoption of OER, training for faculty in OER acquisition and development and contributing back to the OER community is a wonderful set of goals.	- The specifics associated with each component do not provide insight into the scalability, feasibility or sustainability of the project. There are clearly tangible benefits, however, there is much less clarity as to whether those benefits can be achieved. - Plan is lacking sufficient detail. Administrative and LOR system support? Size and configuration of physical space.. multi-media production and editing resources (equipment and support) for content teams? Development of Fellows? Consider a competitive pool for advanced content creation to address K7-12 needs. - No evidence was provided that existing LOR efforts in other states (or for that matter, in higher ed) could be partnered with to facilitate a broader content pool and lower cost. Why must we build our own?
Technical Impact	- High quality digital learning content that is highly accessible, standardized and packaged in a modular format conducive to inclusion and presentation via learning management platforms is desirable. - Vision of centralized LOR.	- Beyond mention of the support for a number of current projects, the balance of this section was cast in the context of cost savings/cost avoidance. The assertion that a LOR with high quality content will reduce the need for districts to purchase student devices is utterly groundless and nearly senseless. It will, in all likelihood, have just the opposite effect. As a device becomes a necessary condition for the delivery of instructional content the assertion that a device is to digital content what a backpack is to books, demonstrates reckless disregard for the technical realities of delivering digital content to 100s of thousands of learners across the state. - BYOD has its own set of challenges and cost implications that need to be addressed. Age and quality of devices and components. Technical support (operating systems, drivers, software versions...) compliance, security implications. Is the infrastructure ready for additional devices? Content standards and tools should be included to ensure a uniform experience for users. - No technical implementation details were provided. While claims are made that this will reduce costs, no data is provided to indicate what current costs are.
Preliminary Plan for Implementation	- A timeline is provided with some indication of scope and sequence. - While the details of the implementation plan are weak, the overall timeline appears to be reasonable.	- There is very little in the way of specific outcomes and the impact they might have on student achievement and teacher effectiveness. - There is a ton of work being done in this area already nationally, but little evidence in implementation of a market survey or other means of determining best practice/potential partnerships, other than a tacit mention of "establishing needed partnerships". Demarcation of roles is not clearly spelled out.
Risk Assessment	- The author outlines the foreseeable risks including solution fragmentation resulting from an inability to achieve stakeholder consensus, and the potential of budget overrun based on improperly scoping the project or having to over promise in an attempt to achieve sufficient adoption velocity to keep the project moving forward.	- No specific mitigation strategy beyond the hope that a dedicated eLearning Project director can sprinkle sufficient magic dust to build and maintain a partnership coalition. - What happens to project funding if State-wide LOR cannot be agreed upon? Can LOR selection and agreement be contingent upon and completed prior to project start? What is the risk

Section	Strengths	Weaknesses
		for low quantity, low quality or relevant content? How will this be mitigated? - One significant risk not identified is reluctance of faculty to move to OER from commercial sources.
Financial Analysis and Budget	- Project proposal, in total, does provide a breakdown of anticipated costs.	- The costs, as indicated in the attached summary document, show that less than 7% will be spent on content, whereas, nearly 20% will be spent on creation/curation. Moreover, the single largest expenditure constituting nearly 35% of the total is for data dashboard integration leading the reviewer to conclude this is miscast as a content/LOR project when, in actuality, it is much more about the data dashboard. - Can cost savings projections for state-wide LOR be provided? Can an IRR/ROI be established for the project?

TECHNICAL PANEL COMMENTS

Technical Panel Checklist	Yes	No	Unknown	Comments
1. Is the project technically feasible?				✓
2. Is the proposed technology appropriate for the project?				
3. Can the technical elements be accomplished within the proposed timeframe and budget?				

Project #	Agency	Project Title
13-02	Department of Education	Education Data Systems Capacity Building

SUMMARY OF REQUEST (Executive Summary from the Proposal)

[Full text of all proposals are posted at: http://nitc.nebraska.gov/commission/project_proposals/2015-2017.html]

The recent Nebraska Education Data Systems study, in response to Legislative Resolution 264, found that Nebraska spends an estimated $100 million annually for technology systems, software systems, and accountability data submissions by the public school districts and the Nebraska Department of Education (NDE). The systems and applications are largely focused on satisfying Federal and State accountability reporting requirements and do not directly contribute to supporting teaching and learning. The districts submit annual collections of data to support accountability to the state using a combination of automated and manual methods. An estimated 655,200 hours are spent by districts preparing the required collections for each year's accountability data submission.

Each district has selected its own set of administrative, teaching and learning, and back office applications and there is a large disparity in the number of applications available in small districts versus larger districts due to budget, staff, and capacity. Outside of Nebraska's largest districts, the digital tools are poorly integrated, there is little support for data-driven decision-making, and modern tools are not available to support instructional improvement necessary for the state's education initiatives of blended learning, teacher and principal evaluation, career readiness, and continuous school improvement.

Nebraska's network of Educational Service Units (ESUs), the ESU Coordinating Council (ESUCC), and Network Nebraska are all contributing to improving the capabilities and the efficiencies of the data systems for the districts. However, the coordination, support, and access for systems can be dramatically improved and serves as the basis for this multi-faceted approach to develop a statewide data system that builds long-term capacity, efficacy, and efficiency for the system of education. The study established 10 recommendations that included five work streams; leverage work conducted using the federal $4.3 million SLDS grant scheduled to end June 2015.

The proposed implementation roadmap for the Nebraska Education Data System estimates a three-year investment of $41,960,110, roughly evenly split across the three years. The rollout plan targets a phase in process over three years that could include 50 districts the first year, 150 the second year, and 245 during the third year resulting in cost savings and efficiencies that will also provide a financial return from substantially-reduced accountability costs and from reduced technology costs to districts. The projected cumulative net return for the investment over five years is $44.8 million. However, the primary benefits from the recommended investments will come from a greatly improved instructional system that improves student performance leading to greater student success.

FUNDING SUMMARY

[Next page]

Nebraska Department of Education Infrastructure Activities

				Biennium Budget Request		
		Year 0 FY 2015 SY 2014-2015 9 Districts		Year 1 FY 2016 SY 2015-2016 50 Districts	Year 2 FY 2017 SY 2016-2017 150 Districts	Year 3 FY 2018 SY 2017-2018 245 Districts
1	**Nebraska Education Infrastructure**		*Activities and Objectives*			
		Pilot initial SIS vendor Ed-Fi interfaces	Identify and collectively procure state-sponsored SIS(s)			
	NDE will leverage the Ed-Fi infrastructure to connect source systems and drive down costs.	Pilot assessment vendor interfaces	Support SIS Vendor Ed-Fi interfaces	$ 166,667	$ 166,667	$ 166,667
			Support assessment vendor Ed-Fi interfaces	166,667	166,667	166,667
			Other source system interfaces to Ed-Fi (HR,SRS, applications)	250,000	250,000	250,000
			Support transfer to state supported systems in years 2 and 3	166,667	166,667	166,667
			Develop identity management solution for statewide single sign-on	100,000	100,000	100,000
			ESUCC infrastructure	500,000	500,000	500,000
			Infrastructure scaling and security audit activities	250,000	250,000	250,000
			Total Contractual Expenditures	1,600,000	1,600,000	1,600,000
			New Positions			
			Chief of Staff	60,523	60,523	60,523
			Chief Technology Officer	68,502	68,502	68,502
			Lead	60,523	60,523	60,523
			Senior	55,047	55,047	55,047
			Analyst	50,099	50,099	50,099
			Analyst	50,099	50,099	50,099
			Total Salary Expenditures	344,793	344,793	344,793
			Benefits Expenditures	165,264	165,264	165,264
			Operating Expenditures	23,805	23,805	23,805
			Travel Expenditures	10,395	10,395	10,395
			Equipment Expenditures	60,360	-	-
			Nebraska Education Infrastructure Total	$ 2,204,617	$ 2,144,257	$ 2,144,257
2	**NDE Data Collection System**		*Objectives*			
	NDE will reduce the burden of accountability data submissions on districts through automated process leveraging the Ed-Fi infrastructure.	Accountability Pilot - integrate CDC, Staff, NSSRS d	Statewide rollout with dual submissions (rollout plan based on SIS vendor)	$ 500,000	$ 500,000	$ 500,000
			Develop and validate state accountability reports	500,000	500,000	500,000
			Develop business rules and validation for automatic accountability submissions	250,000	250,000	250,000
			Develop and validate federal accountability report submissions	500,000	500,000	500,000
			Develop district review and approval infrastructure	250,000	250,000	250,000
			Total Contractual Expenditures	2,000,000	2,000,000	2,000,000
			New Positions			
			Director, Accountability Data Systems	68,502	68,502	68,502
			Program Specialist III	55,047	55,047	55,047
			Database Analyst Lead	60,523	60,523	60,523
			Database Analyst Senior	55,047	55,047	55,047
			Database Analyst	50,099	50,099	50,099
			Database Analyst	50,099	50,099	50,099
			Total Salary Expenditures	339,317	339,317	339,317
			Benefits Expenditures	164,380	164,380	164,380
			Operating Expenditures	23,805	23,805	23,805
			Travel Expenditures	14,070	14,070	14,070
			Equipment Expenditures	37,680	-	-
			NDE Accountability Data System Total	$ 2,579,252	$ 2,541,572	$ 2,541,572
3	**NDE Education Intelligence System**		*Objectives*			
		Pilot SLDS Student-Level Dashboard	Dashboard statewide rollout	$ 200,000	$ 200,000	$ 200,000
			Dashboard updates and extensions	500,000	500,000	500,000
			District data warehouses and reporting layer	333,333	333,333	333,333
			District data warehouse security layer (with and without de-identification)	250,000	250,000	250,000
			NDE data warehouse cubes and BI layer	166,667	166,667	166,667
			Total Contractual Expenditures	1,450,000	1,450,000	1,450,000
			New Positions			
	NDE will create education intelligence - access to actionable insight - through a warehouse, business intelligence tools, and increased internal capacity.		Chief Privacy Officer	79,873	79,873	79,873
			Director, Data Research and Evaluation	68,502	68,502	68,502
			Database Analyst Lead	60,523	60,523	60,523
			Database Analyst Senior	55,047	55,047	55,047
			Database Analyst	50,099	50,099	50,099
			Database Analyst	50,099	50,099	50,099
			Total Salary Expenditures	364,143	364,143	364,143
			Benefits Expenditures	168,387	168,387	168,387
			Operating Expenditures	24,510	35,510	35,510
			Travel Expenditures	17,680	17,680	17,680
			Equipment Expenditures	60,360	-	-
			NDE Education Intelligence System Total	$ 2,085,080	$ 2,035,720	$ 2,035,720
4	**Help Desk & Support**					
		Virtual Help Desk Pilot - Dashboards	Expand help-desk support to include Year 1,2 & 3 systems	$ 50,000	$ 50,000	$ 50,000
	NDE, along with the ESUCC and ESU's, will provide technical support for Nebraska education data systems through a virtual help desk and coordinated knowledge transfer.	PD Curriculum	Develop professional development curriculum on Year 1,2 & 3 systems	50,000	50,000	50,000
			Integrate statewide ticketing system for "Virtual help desk"	166,667	166,667	166,667
			Level 4 Support and Contracts	500,000	500,000	500,000
			Total Contractual Expenditures	766,667	766,667	766,667
			New Positions			
			Director, Project Management Office	68,502	68,502	68,502
			IT Help Desk Specialist Senior	50,099	50,099	50,099
			IT Help Desk Specialist	41,706	41,706	41,706
			IT Help Desk Specialist	41,706	41,706	41,706
			Project Manager	50,099	50,099	50,099
			Project Manager	50,099	50,099	50,099
			Total Salary Expenditures	302,211	302,211	302,211
			Benefits Expenditures	158,393	158,394	158,395
			Operating Expenditures	23,805	26,555	26,555
			Travel Expenditures	10,395	10,396	10,397
			Equipment Expenditures	43,350	-	-
			Help Desk & Support Total	$ 1,304,821	$ 1,364,323	$ 1,364,225
			Total NDE DRE Capacity Building	$ 8,173,770	$ 7,985,772	$ 7,985,774
IIS	**NE Instructional Improvement System**		**Objectives**			
		Identify key systems:	Identify and collectively procure state-sponsored systems			
	NDE will build the capacity of Nebraska educators to continuously improve the quality of instruction for students through integrated, efficient systems. This will serve as an application store.	- learning management	Support vendors in integrating with SSO and state data system	$ 166,667	$ 166,667	$ 166,667
		- blended learning	Provide PD for districts	83,333	83,333	83,333
		- teacher/principal evaluation	System licenses paid by state	5,000,000	5,000,000	5,000,000
		- school climate	App Store			
		- career readiness	Survey Resources and Tools			
			Total Contractual Expenditures	5,250,000	5,250,000	5,250,000
			New Positions			
			Director, Instructional Improvement System	68,502	68,502	68,502
			Education Specialist IV	68,502	68,502	68,502
			Program Specialist III	60,523	60,523	60,523
			Applications Developer Lead	60,523	60,523	60,523
			Applications Developer Senior	55,047	55,047	55,047
			Applications Developer	50,099	50,099	50,099
			Applications Developer	50,099	50,099	50,099
			Total Salary Expenditures	413,295	413,295	413,295
			Benefits Expenditures	194,588	194,588	194,588
			Operating Expenditures	28,360	39,360	39,360
			Travel Expenditures	22,475	22,475	22,475
			Equipment Expenditures	66,640	-	-
			NE Instructional Improvement System Total	$ 5,975,358	$ 5,919,718	$ 5,919,718
			Total NDE DRE Budget Issue Requests	$ 14,149,128	$ 13,905,490	$ 13,905,492

PROJECT SCORE

Section	Reviewer 1	Reviewer 2	Reviewer 3	**Mean**	Maximum Possible
Goals, Objectives, and Projected Outcomes	15	12	11	13	15
Project Justification / Business Case	20	18	24	21	25
Technical Impact	18	15	18	17	20
Preliminary Plan for Implementation	8	7	6	7	10
Risk Assessment	8	6	6	7	10
Financial Analysis and Budget	18	14	15	16	20
			TOTAL	**80**	100

REVIEWER COMMENTS

Section	Strengths	Weaknesses
Goals, Objectives, and Projected Outcomes	- Detailed plan that accounts for systemic change by increasing human, technical and fiscal resources. The proposal has clear goals, technically feasible deliverables and a rich set of milestones to gauge project progress. - Vision: State-wide access to timely, consistent and actionable business intelligence. Improved economies of scale by centralizing resources and standardizing systems and processes. - Goals are well defined	- The scope of the project is considerable requiring a great deal of communication and stakeholder involvement. - Did we consider vendor SAAS particularly as it relates to state sponsored SIS? Did we consider outsourcing Helpdesk Services to take advantage of the economies of scale? - Metrics for several of the goals (cost savings for example) are missing or poorly defined.
Project Justification / Business Case	- The proposal delineates three credible benefits including reduced accountability costs through standardization of data exchange, reduced technology costs through an enterprise approach to data warehousing/business intelligence and improved decision support through the equitable provision of data analytics to all school districts. - A grand idea with good architectural decisions. Open data standards to allow multiple vendors to play in the space, giving flexibility for schools to select solutions based on software scope or value add. Using collaborative purchase power to drive down costs.	- The project deliverables are highly dependent upon a level of data standardization never achieved across the 100s of K12 school districts in Nebraska. - It would be helpful to have more insight into how the investment return is calculated and where these funds are redirected too. If the resources remain in the districts working on other initiatives it should not be reported as a savings.
Technical Impact	- The proposal constitutes a systemic consideration of data gathering, warehousing, analysis and reporting. - Other states have implemented a similar model. - Strong use of open data standards and the resulting implementation flexibility are major strengths of this project.	- The greatest concern of the reviewer is achieving the operational success necessary to a leverage the functional capacity. - Availability of experienced and quality staff to perform the key functions.
Preliminary Plan for Implementation	- The author provides a clear operational/functional roadmap while identifying key stakeholder partners.	- The specific roles of stakeholder partners is vague and does not, in all cases, match their current capacities. - Recruiting, developing and retaining key talent at established salary levels. - There are a significant number of moving parts in this project and many of the critical milestones have external dependencies beyond the control of the project team. The project plan as proposed does make nominal attempts to plan around these risks, but the critical date issues could easily compound and place the project budget at significant risk by extending the implementation by a significant margin.
Risk Assessment	- Risks have been identified and key dependencies recognized.	- Dependencies associated with the work of stakeholder agencies cannot be fully mitigated

Section	Strengths	Weaknesses
	- Risks are well identified.	within the context of the proposed project. This is less a failing of the proposed and more a recognition of the difficulties associated with interagency projects. - Hiring and Retaining Key talent. - The mitigation strategies for external risks (vendor responsiveness to implementation timelines) seem to be optimistic enough to put the project at significant risk.
Financial Analysis and Budget	- Costs and overall budget is clearly defined. - If all goes well, the budget seems very reasonable.	- Proposed salaries for key personnel look very low and will make attracting qualified applicants difficult. - Detailed Justification of Staffing levels and source for Compensation benchmarks. - If the project Is significantly delayed by external risks, additional funding could be required to extend the project timeline.

TECHNICAL PANEL COMMENTS

Technical Panel Checklist	Yes	No	Unknown	Comments
1. Is the project technically feasible?				✓
2. Is the proposed technology appropriate for the project?				
3. Can the technical elements be accomplished within the proposed timeframe and budget?				

Project #	Agency	Project Title
13-03	Department of Education	Instructional Improvement Systems

SUMMARY OF REQUEST (Executive Summary from the Proposal)

[Full text of all proposals are posted at: http://nitc.nebraska.gov/commission/project_proposals/2015-2017.html]

The recent Nebraska Education Data Systems study, in response to Legislative Resolution 264, found that Nebraska spends an estimated $100 million annually for technology systems, software systems, and accountability data submissions by the public school districts and the Nebraska Department of Education (NDE). The systems and applications are largely focused on satisfying Federal and State accountability reporting requirements and do not directly contribute to supporting teaching and learning. The districts submit annual collections of data to support accountability to the state using a combination of automated and manual methods. An estimated 655,200 hours are spent by districts preparing the required collections for each year's accountability data submission.

Each district has selected its own set of administrative, teaching and learning, and back office applications and there is a large disparity in the number of applications available in small districts versus larger districts due to budget, staff, and capacity. Outside of Nebraska's largest districts, the digital tools are poorly integrated, there is little support for data-driven decision-making, and modern tools are not available to support instructional improvement necessary for the state's education initiatives of blended learning, teacher and principal evaluation, career readiness, and continuous school improvement.

Nebraska's network of Educational Service Units (ESUs), the ESU Coordinating Council (ESUCC), and Network Nebraska are all contributing to improving the capabilities and the efficiencies of the data systems for the districts. However, the coordination, support, and access for systems can be dramatically improved and serves as the basis for this multi-faceted approach to develop a statewide data system that builds long-term capacity, efficacy, and efficiency for the system of education. The study established 10 recommendations that included five work streams; leverage work conducted using the federal $4.3 million SLDS grant scheduled to end June 2015.

The proposed implementation roadmap for the Nebraska Education Data System estimates a three-year investment of $41,960,110, roughly evenly split across the three years. The rollout plan targets a phase in process over three years that could include 50 districts the first year, 150 the second year, and 245 during the third year resulting in cost savings and efficiencies that will also provide a financial return from substantially-reduced accountability costs and from reduced technology costs to districts. The projected cumulative net return for the investment over five years is $44.8 million. However, the primary benefits from the recommended investments will come from a greatly improved instructional system that improves student performance leading to greater student success.

FUNDING SUMMARY

[Next page]

Nebraska Department of Education Infrastructure Activities

				Biennium Budget Request		
		Year 0 FY 2015 SY 2014-2015 9 Districts		Year 1 FY 2016 SY 2015-2016 50 Districts	Year 2 FY 2017 SY 2016-2017 150 Districts	Year 3 FY 2018 SY 2017-2018 245 Districts
1	**Nebraska Education Infrastructure**		*Activities and Objectives*			
		Pilot initial SIS vendor Ed-Fi interfaces	Identify and collectively procure state-sponsored SIS(s)			
	NDE will leverage the Ed-Fi infrastructure to connect source systems and drive down costs.	Pilot assessment vendor interfaces	Support SIS Vendor Ed-Fi interfaces	$ 166,667	$ 166,667	$ 166,667
			Support assessment vendor Ed-Fi interfaces	166,667	166,667	166,667
			Other source system interfaces to Ed-Fi (HR, SRS, applications)	250,000	250,000	250,000
			Support transfer to state supported systems in years 2 and 3	166,667	166,667	166,667
			Develop identity management solution for statewide single sign-on	100,000	100,000	100,000
			ESUCC infrastructure	500,000	500,000	500,000
			Infrastructure scaling and security audit activities	250,000	250,000	250,000
			Total Contractual Expenditures	1,600,000	1,600,000	1,600,000
			New Positions			
			Chief of Staff	60,523	60,523	60,523
			Chief Technology Officer	68,502	68,502	68,502
			Lead	60,523	60,523	60,523
			Senior	55,047	55,047	55,047
			Analyst	50,099	50,099	50,099
			Analyst	50,099	50,099	50,099
			Total Salary Expenditures	344,793	344,793	344,793
			Benefits Expenditures	165,264	165,264	165,264
			Operating Expenditures	23,805	23,805	23,805
			Travel Expenditures	10,395	10,395	10,395
			Equipment Expenditures	60,360	-	-
			Nebraska Education Infrastructure Total	$ 2,304,617	$ 2,144,257	$ 2,144,257
2	**NDE Data Collection System**		*Objectives*			
		Accountability Pilot - integrate CDC, Staff, NSSRS d	Statewide rollout with dual submissions (rollout plan based on SIS vendor)	$ 500,000	$ 500,000	$ 500,000
	NDE will reduce the burden of accountability data submissions on districts through automated process leveraging the Ed-Fi infrastructure.		Develop and validate state accountability reports	500,000	500,000	500,000
			Develop business rules and validation for automatic accountability submissions	250,000	250,000	250,000
			Develop and validate federal accountability report submissions	500,000	500,000	500,000
			Develop district review and approval infrastructure	250,000	250,000	250,000
			Total Contractual Expenditures	2,000,000	2,000,000	2,000,000
			New Positions			
			Director, Accountability Data Systems	68,502	68,502	68,502
			Program Specialist III	55,047	55,047	55,047
			Database Analyst Lead	60,523	60,523	60,523
			Database Analyst Senior	55,047	55,047	55,047
			Database Analyst	50,099	50,099	50,099
			Database Analyst	50,099	50,099	50,099
			Total Salary Expenditures	339,317	339,317	339,317
			Benefits Expenditures	164,380	164,380	164,380
			Operating Expenditures	23,805	23,805	23,805
			Travel Expenditures	14,070	14,070	14,070
			Equipment Expenditures	37,680	-	-
			NDE Accountability Data System Total	$ 2,579,252	$ 2,541,572	$ 2,541,572
3	**NDE Education Intelligence System**		*Objectives*			
		Pilot SLDS Student-Level Dashboard	Dashboard statewide rollout	$ 200,000	$ 200,000	$ 200,000
			Dashboard updates and extensions	500,000	500,000	500,000
			District data warehouses and reporting layer	333,333	333,333	333,333
			District data warehouse security layer (with and without de-identification)	250,000	250,000	250,000
			NDE data warehouse cubes and BI layer	166,667	166,667	166,667
			Total Contractual Expenditures	1,450,000	1,450,000	1,450,000
			New Positions			
	NDE will create education intelligence - access to actionable insight - through a warehouse, business intelligence tools, and increased internal capacity.		Chief Privacy Officer	79,873	79,873	79,873
			Director, Data Research and Evaluation	68,502	68,502	68,502
			Database Analyst Lead	60,523	60,523	60,523
			Database Analyst Senior	55,047	55,047	55,047
			Database Analyst	50,099	50,099	50,099
			Database Analyst	50,099	50,099	50,099
			Total Salary Expenditures	364,143	364,143	364,143
			Benefits Expenditures	168,387	168,387	168,387
			Operating Expenditures	24,510	35,510	35,510
			Travel Expenditures	17,680	17,680	17,680
			Equipment Expenditures	60,360	-	-
			NDE Education Intelligence System Total	$ 2,085,080	$ 2,035,720	$ 2,035,720
4	**Help Desk & Support**					
		Virtual Help Desk Pilot - Dashboards	Expand help-desk support to include Year 1,2 & 3 systems	$ 50,000	$ 50,000	$ 50,000
	NDE, along with the ESUCC and ESU's, will provide technical support for Nebraska education data systems through a virtual help desk and coordinated knowledge transfer.	PD Curriculum	Develop professional development curriculum on Year 1,2 & 3 systems	50,000	50,000	50,000
			Integrate statewide ticketing system for "virtual help desk"	166,667	166,667	166,667
			Level 4 Support and Contracts	500,000	500,000	500,000
			Total Contractual Expenditures	766,667	766,667	766,667
			New Positions			
			Director, Project Management Office	68,502	68,502	68,502
			IT Help Desk Specialist Senior	50,099	50,099	50,099
			IT Help Desk Specialist	41,706	41,706	41,706
			IT Help Desk Specialist	41,706	41,706	41,706
			Project Manager	50,099	50,099	50,099
			Project Manager	50,099	50,099	50,099
			Total Salary Expenditures	302,211	302,211	302,211
			Benefits Expenditures	158,393	158,394	158,395
			Operating Expenditures	23,805	26,555	26,555
			Travel Expenditures	10,395	10,396	10,397
			Equipment Expenditures	43,350	-	-
			Help Desk & Support Total	$ 1,304,821	$ 1,364,323	$ 1,364,325
			Total NDE DRE Capacity Building	$ 6,173,770	$ 7,985,772	$ 7,985,774
IIS	**NE Instructional Improvement System**		**Objectives**			
		Identify key systems:	Identify and collectively procure state-sponsored systems			
	NDE will build the capacity of Nebraska educators to continuously improve the quality of instruction for students through integrated, efficient systems. This will serve as an application store.	- learning management	Support vendors in integrating with SSO and state data system	$ 166,667	$ 166,667	$ 166,667
		- blended learning	Provide PD for districts	83,333	83,333	83,333
		- teacher/principal evaluation	System licenses paid by state	5,000,000	5,000,000	5,000,000
		- school climate	App Store			
		- career readiness	Survey Resources and Tools			
			Total Contractual Expenditures	5,250,000	5,250,000	5,250,000
			New Positions			
			Director, Instructional Improvement System	68,502	68,502	68,502
			Education Specialist IV	68,502	68,502	68,502
			Program Specialist III	60,523	60,523	60,523
			Applications Developer Lead	60,523	60,523	60,523
			Applications Developer Senior	55,047	55,047	55,047
			Applications Developer	50,099	50,099	50,099
			Applications Developer	50,099	50,099	50,099
			Total Salary Expenditures	413,295	413,295	413,295
			Benefits Expenditures	194,588	194,588	194,588
			Operating Expenditures	28,360	39,360	39,360
			Travel Expenditures	22,475	22,475	22,475
			Equipment Expenditures	66,640	-	-
			NE Instructional Improvement System Total	$ 5,975,358	$ 5,919,718	$ 5,919,718
			Total NDE DRE Budget Issue Requests	$ 14,149,128	$ 13,905,490	$ 13,905,492

PROJECT SCORE

Section	Reviewer 1	Reviewer 2	Reviewer 3	**Mean**	Maximum Possible
Goals, Objectives, and Projected Outcomes	15	7	11	11	15
Project Justification / Business Case	20	15	24	20	25
Technical Impact	18	10	18	15	20
Preliminary Plan for Implementation	8	6	6	7	10
Risk Assessment	8	6	6	7	10
Financial Analysis and Budget	18	0	15	11	20
			TOTAL	**70**	100

REVIEWER COMMENTS

Section	Strengths	Weaknesses
Goals, Objectives, and Projected Outcomes	- Detailed plan that accounts for systemic change by increasing human, technical and fiscal resources. The proposal has clear goals, technically feasible deliverables and a rich set of milestones to gauge project progress.	- The scope of the project is considerable requiring a great deal of communication and stakeholder involvement that has not been historically in evidence. - Essentially a replica of Educational Capacity proposal
Project Justification / Business Case	- The proposal delineates three credible benefits including reduced accountability costs through standardization of data exchange, reduced technology costs through an enterprise approach to data warehousing/business intelligence and improved decision support through the equitable provision of data analytics to all school districts.	- The project deliverables are highly dependent upon a level of cooperation and agreement upon instructional methods not previously in evidence across the 100s of K12 school districts in Nebraska. - Same justification as Educational Capacity proposal
Technical Impact	- The proposal constitutes a systemic approach to engaging learners and instructors in a digital environment that honors teacher effectiveness as the key to gains in student achievement. The model calls for the foundation of guaranteed and viable curriculum supported by solid instructional design and evaluated through assessment for learning and of growth.	- The greatest concern of the reviewer is achieving the operational success necessary to a leverage the functional capacity. Moreover, this constitutes a fundamental shift in instructional delivery that represents 2nd order change for nearly all K12 teachers. It won't come easily, it won't come quickly, it won't come without leadership and it won't come without professional casualties. - Essentially a replica of Educational Capacity proposal
Preliminary Plan for Implementation	- The author provides a clear operational/functional roadmap while identifying key stakeholder partners.	- The specific roles of stakeholder partners is vague and does not, in all cases, match their current capacities. This is especially true in the area of professional development. - Essentially the same as Educational capacity proposal
Risk Assessment	- Risks have been identified and key dependencies recognized.	- Dependencies associated with the work of stakeholder agencies cannot be fully mitigated within the context of the proposed project. This is less a failing of the proposed and more a recognition of the difficulties associated with interagency projects - Essentially the same as Educational capacity proposal
Financial Analysis and Budget	- Costs and overall budget is clearly defined.	- Proposed salaries for key personnel look very low and will make attracting qualified applicants difficult. - Essentially the same as Educational capacity proposal

[Note: Reviewer 3 gave the same scores for both projects 13-02 and 13-03, with no comments on 13-03. The reviewer noted the similarities between the proposals and commented that they appear to be two facets of the same proposal.]

TECHNICAL PANEL COMMENTS

Technical Panel Checklist	Yes	No	Unknown	Comments
1. Is the project technically feasible?				✓
2. Is the proposed technology appropriate for the project?				
3. Can the technical elements be accomplished within the proposed timeframe and budget?				

Project #	Agency	Project Title
27-01	Department of Roads	Mainframe Migration

SUMMARY OF REQUEST (Executive Summary from the Proposal)

[Full text of all proposals are posted at: http://nitc.nebraska.gov/commission/project_proposals/2015-2017.html]

The mainframe has been a valuable tool for the NDOR over the last 40 years. But as with all technologies, things change over time and organizations should evaluate the state of their applications; are we providing our users the functionality they need, are we doing it in a cost-effective manner and are we able to support these needs not just over the next few years but in the next 10 years or possibly longer.

That is what the NDOR is doing. We talked with our users about their current systems and their future needs and then looked at our current workforce and the ability to support this environment in the future as we face retirements and the ability to find the skills necessary to support the environment. We determined that the best course of action for the NDOR is to migrate our applications off of the mainframe to a platform we believe provides the functionality our users are looking for and also something that we are able to support in the future. Our plan is to create an RFP to hire an outside source either re-host or convert our mainframe applications to a technology centered on Microsoft and hosted by the Office of the CIO. An RFI has been completed that received two responses, which helped us in determining what we should budget for this project.

FUNDING SUMMARY

	Prior Expended	FY2015 Appr/Reappr	FY2016 Request	FY2017 Request	Future	Total
1. Personnel Costs						$ -
2. Contractual Services						
2.1 Design			$ 300,000.00	$ 300,000.00		$ 600,000.00
2.2 Programming			$ 700,000.00	$ 700,000.00		$ 1,400,000.00
2.3 Project Management			$ 200,000.00	$ 200,000.00		$ 400,000.00
2.4 Other						$ -
3. Supplies and Materials						$ -
4. Telecommunications						$ -
5. Training						$ -
6. Travel						$ -
7. Other Operating Costs						$ -
8. Capital Expenditures						
8.1 Hardware			$ 25,000.00	$ 25,000.00		$ 50,000.00
8.2 Software			$ 25,000.00	$ 25,000.00		$ 50,000.00
8.3 Network						$ -
8.4 Other						$ -
TOTAL COSTS	$ -	$ -	$ 1,250,000.00	$ 1,250,000.00	$ -	$ 2,500,000.00
General Funds						$ -
Cash Funds			$ 1,250,000.00	$ 1,250,000.00		$ 2,500,000.00
Federal Funds						$ -
Revolving Funds						$ -
Other Funds						$ -
TOTAL FUNDS	$ -	$ -	$ 1,250,000.00	$ 1,250,000.00	$ -	$ 2,500,000.00

PROJECT SCORE

Section	Reviewer 1	Reviewer 2	Reviewer 3	**Mean**	Maximum Possible
Goals, Objectives, and Projected Outcomes	12	10	13	12	15
Project Justification / Business Case	20	15	23	19	25
Technical Impact	15	15	18	16	20
Preliminary Plan for Implementation	7	7	8	7	10
Risk Assessment	6	8	10	8	10
Financial Analysis and Budget	15	13	20	16	20
			TOTAL	**78**	100

REVIEWER COMMENTS

Section	Strengths	Weaknesses
Goals, Objectives, and Projected Outcomes	- The goal of consolidating application platforms and languages does help with staffing by limiting skills required by staff. - Clearly states goal and the objectives of the project.	- The expectation that this can be done with an existing COTS tool is not reasonable. The more likely outcome is the rewrite or replacement of the business system. - Measurement and assessment methods could use some fleshing out.
Project Justification / Business Case	- Based on the age of their applications, it is appropriate for NDOR to be exploring this to ensure they are where they need to be as an Agency in regards to their applications. - The plan recognizes the need to replace or update aging business systems. - Clearly defined tangible benefit of a significant cost savings.	- This might be a difficult project to determine tangible benefits due to the size of it and not knowing if NDOR has already mapped out interdependencies between applications to see when and how all applications are tied together. - The return on investment will be 4 years using the $1.4M estimate, 7 years if the costs are $2.5M. I do not think the all of the cost to convert these applications has been identified and the ROI will be much longer. - Still evaluating other solutions - no mention of any solutions being rejected.
Technical Impact	- NDOR understands the implications of staying where they are unless something is done in the way of training and teaching students to ensure these applications can be supported in the language they are currently written in. This project could potentially have a huge technical impact on the users within NDOR as there might be a need for extensive training for their staff. - When completed technology will be consolidated for DOR applications. - Clearly describes replacement of technology / platform that is growing increasingly difficult to support due to limited available resources.	- Unless applications are rewritten, you are just trading one dependency for another. - Complete reliance upon a single-vendor proprietary technology / platform. Does not address security related to the project objectives.
Preliminary Plan for Implementation	- NDOR has spent a considerable amount of time preparing for this possible change by issuing the RFI and researching as much as possible. - RFP has not been completed, but clearly describes intended plans, teams, resources, etc.	- Understand no timeline yet but NDOR needs to make sure they recognize all of the potential interdependencies with a project of this size and have strong project management. Still so early in the project it is difficult to tell if the plan for implementation is solid. - Many of the resources required for this implementation are the same ones mentioned in other plans. Are there adequate staffing to implement this solution in a timely manner.
Risk Assessment	- Reasonable examination of the risks. - Good description of possible barriers and mitigation strategy.	- Pretty generic risk assessment statements. Do not know how much time NDOR has spent on uncovering specific risks to any of their Division's as a result of this change. - There are multiple variables that could impact this project and many of them are outside of the control of the agency.
Financial Analysis and Budget	- RFI has been issued, some details have been identified. - Very clear, easy to understand, and quite reasonable to see the anticipated cost savings.	- Because it is so early in the project, it is difficult to say for sure what the financial benefits will be or the costs may be once interdependencies are determined. - All costs have not been identified and details on what technical solution (convert or translate) will be implemented are not clear.

TECHNICAL PANEL COMMENTS

Technical Panel Checklist	Yes	No	Unknown	Comments
1. Is the project technically feasible?				✓
2. Is the proposed technology appropriate for the project?				
3. Can the technical elements be accomplished within the proposed timeframe and budget?				

Project #	Agency	Project Title
27-02	Department of Roads	Stock Supply System

SUMMARY OF REQUEST (Executive Summary from the Proposal)

[Full text of all proposals are posted at: http://nitc.nebraska.gov/commission/project_proposals/2015-2017.html]

The existing supply system application is mainframe based and has been in production for over 15 years. This has been a useful tool for the Procurement section of the Operations Division and it has made it easier for all Divisions and District to order supplies necessary for them to do their day to day operations.

As with all software applications and with hands on day-to-day operations, there comes a time when users determine new needs, see opportunities to make improvements and take advantage of newer technologies. Moving applications off of the mainframe is but one of the Business Technology Support Division's (BTSD) goals. NDOR is a Microsoft based shop utilizing newer technologies such as C#/.NET and SQL Server 2012 while our software development methodology follows the Agile practice.

The goal of this project is finding or developing a system to provide for a warehouse management system (WMS) of supplies that will replace the legacy Supply Inventory System (SUP). The goal is to have a system that will allow for inventory control/monitoring of stock, ordering, receiving, picking, replenishments, shipping and returns while utilizing Radio Frequency Identification (RF) devices or other similar electronic scanning functionality. The WMS should also provide substantial reporting features that will help with overall WMS management. I have attached a Business Process Modeling report produced in-house which outlines the current Stock Supply system and describes what NDOR had envisioned to be a suitable replacement for the current system.

FUNDING SUMMARY

	Prior Expended	FY2015 Appr/Reappr	FY2016 Request	FY2017 Request	Future	Total
1. Personnel Costs						$ -
2. Contractual Services						
2.1 Design			$ 75,000.00	$ 75,000.00		$ 150,000.00
2.2 Programming			$ 75,000.00	$ 75,000.00		$ 150,000.00
2.3 Project Management			$ 30,000.00	$ 30,000.00		$ 60,000.00
2.4 Other						$ -
3. Supplies and Materials						$ -
4. Telecommunications						$ -
5. Training						$ -
6. Travel						$ -
7. Other Operating Costs						$ -
8. Capital Expenditures						
8.1 Hardware			$ 20,000.00	$ 20,000.00		$ 40,000.00
8.2 Software			$ 100,000.00	$ 100,000.00		$ 200,000.00
8.3 Network						$ -
8.4 Other						$ -
TOTAL COSTS	$ -	$ -	$ 300,000.00	$ 300,000.00	$ -	$ 600,000.00
General Funds						$ -
Cash Funds			$ 300,000.00	$ 300,000.00		$ 600,000.00
Federal Funds						$ -
Revolving Funds						$ -
Other Funds						$ -
TOTAL FUNDS	$ -	$ -	$ 300,000.00	$ 300,000.00	$ -	$ 600,000.00

[Note: After the project proposal was submitted, NDOR received responses to their Request for Information (RFI) relating to this project. Costs estimates from the responses ranged from $200,000 to $1,400,000 for the project.]

PROJECT SCORE

Section	Reviewer 1	Reviewer 2	Reviewer 3	**Mean**	Maximum Possible
Goals, Objectives, and Projected Outcomes	14	12	15	14	15
Project Justification / Business Case	21	25	25	24	25
Technical Impact	17	15	18	17	20
Preliminary Plan for Implementation	9	7	8	8	10
Risk Assessment	9	7	10	9	10
Financial Analysis and Budget	15	15	19	16	20
			TOTAL	**87**	100

REVIEWER COMMENTS

Section	Strengths	Weaknesses
Goals, Objectives, and Projected Outcomes	- It would appear a significant amount of time has been spent on documenting and determining what is needed internally by NDOR. - Project team has identified requirements and business users were involved. - Clearly defined goals, objectives, and expected outcomes. Measurement and assessment methods are in line with real world system functions, and seem reasonable.	- Large systems with many users.
Project Justification / Business Case	- The justification is appropriate that if NDOR is able to successfully procure the right solution, the benefits they have listed are what should be realized. Department of Correctional Services is using a module in E1/JD Edwards for the same purpose so it might be beneficial to talk with them. - Time for mainframe solution to be replaced to enhance functionality. - Tangible (cost savings) and intangible benefits (better interface) seem reasonable and clearly defined.	- At this point, it does not appear that NDOR is able to determine an economic return on investment with this project. - Requirements definition may be more challenging than described, limited internal resources to complete the project
Technical Impact	- It is appropriate for NDOR to be considering updating this based on the age of what they currently have and its apparent inability to meet their internal needs. Would encourage them to work with OCIO for the placement of any hardware into the State Data Center as well as using the wireless access points that the State has standardized on. - Team has spent time collecting business flow and some requirements.	- Need to minimize the number of interfaces into the State ERP system so would encourage NDOR to utilize E1 if possible. - Technical interfaces with multiple financial systems will be complicated and require ongoing coordination and maintenance - Solution has not been selected, so technical descriptions are somewhat vague. Does not address security.
Preliminary Plan for Implementation	- The team that has been assembled to work on this project is diverse and represents NDOR business needs - Project team has worked with business clients to identify some requirements. - Teams and sponsors clearly defined.	- Although the RFP has not been completed, there should be a reasonable timeframe that can be established to get this implemented. - Finding vendor with solution to meet needs without modification will be difficult. - No RFP issued yet, so details somewhat lacking in terms of plan, etc.
Risk Assessment	- Project team has worked with business clients to identify some requirements - Possible barriers, and mitigation strategies are clearly defined.	- Solution is complex and requires interfaces to multiple systems.
Financial Analysis and Budget	- Financial information seems sufficient and reasonable.	- Pretty generic estimates. - Cost estimate is seems low for application of this size.

TECHNICAL PANEL COMMENTS

Technical Panel Checklist	Yes	No	Unknown	Comments
1. Is the project technically feasible?				✓
2. Is the proposed technology appropriate for the project?				
3. Can the technical elements be accomplished within the proposed timeframe and budget?				

Project #	Agency	Project Title
27-03	Department of Roads	ARMS Enhancements

SUMMARY OF REQUEST (Executive Summary from the Proposal)

[Full text of all proposals are posted at: http://nitc.nebraska.gov/commission/project_proposals/2015-2017.html]

ARMS stands for Automated Right-of-Way Management System. In the late 90s, the head of our Right-of-Way (ROW) Division had this idea of a workflow solution to handle the ROW process from the time preliminary plans came to the Division until the purchasing of ROW had been completed and the project was to be archived. They worked with developers at NDOR to design a system that used Lotus Notes as the base, since at that time it was the e-mail system that was used by most State Agencies. In 2008, the Office of the CIO (OCIO) began to implement a statewide e-mail system based on Microsoft Outlook. Agencies were to eliminate other mail systems, which meant NDOR had to get rid of Lotus Notes. That being the case, we began work on developing an RFP to find a vendor who could provide a Commercial off the Shelf (COTS) system to replace ARMS. All of this, including the award of the RFP, was completed prior to the decision to implement OnBase as the Enterprise Content Management System (ECMS) for the State.

As with a number of software implementations, as the work was being done a number of enhancements arose once the ROW Division began testing the software. We also discovered a number of items that we overlooked in the RFP that should have been included. Also, change in leadership along with other key members in the Division has led to changes in their processes which need to be taken into account in the system. The implementation has been going on for over two years and final sign-off for the RFP is planned in June, 2015. Once that is done, we will be in maintenance mode and any enhancements or additional work must be done as separate statements of work. That is the reason for this project.

FUNDING SUMMARY

	Prior Expended	FY2015 Appr/Reappr	FY2016 Request	FY2017 Request	Future	Total
1. Personnel Costs						$ -
2. Contractual Services						
2.1 Design			$ 75,000.00	$ 75,000.00		$ 150,000.00
2.2 Programming			$ 100,000.00	$ 100,000.00		$ 200,000.00
2.3 Project Management			$ 75,000.00	$ 75,000.00		$ 150,000.00
2.4 Other						$ -
3. Supplies and Materials						$ -
4. Telecommunications						$ -
5. Training						$ -
6. Travel						$ -
7. Other Operating Costs						$ -
8. Capital Expenditures						
8.1 Hardware			$ -	$ -		$ -
8.2 Software			$ -	$ -		$ -
8.3 Network						$ -
8.4 Other						$ -
TOTAL COSTS	$ -	$ -	$ 250,000.00	$ 250,000.00	$ -	$ 500,000.00
General Funds						$ -
Cash Funds			$ 250,000.00	$ 250,000.00		$ 500,000.00
Federal Funds						$ -
Revolving Funds						$ -
Other Funds						$ -
TOTAL FUNDS	$ -	$ -	$ 250,000.00	$ 250,000.00	$ -	$ 500,000.00

PROJECT SCORE

Section	Reviewer 1	Reviewer 2	Reviewer 3	**Mean**	Maximum Possible
Goals, Objectives, and Projected Outcomes	12	10	15	12	15
Project Justification / Business Case	20	19	22	20	25
Technical Impact	15	16	15	15	20
Preliminary Plan for Implementation	6	6	7	6	10
Risk Assessment	7	6	10	8	10
Financial Analysis and Budget	15	13	18	15	20
			TOTAL	**77**	100

REVIEWER COMMENTS

Section	Strengths	Weaknesses
Goals, Objectives, and Projected Outcomes	- New systems moves away from Lotus notes and uses enterprise content management solution. - Clearly defined goals, objectives, outcomes, etc.	- It is not clear on the division of work to be done in the ROW application or ECM.
Project Justification / Business Case	- The justification is appropriate. - Project makes use of enterprise solutions. - Automation and improved records management are reasonable justifications for a project such as this.	- It would appear that this project is a result of missing items in the original RFP that was issued for the replacement of their automated ROW system. NDOR needs to ensure that this second attempt they are making will be all inclusive of their needs. - Scope of work is not clear - No indication of other solutions evaluated.
Technical Impact	- DOR has experience with solutions to be implemented.	- NDOR needs to ensure they have a clearly defined scope to their "definition of change" comment otherwise this could become quite costly for them. - Scope of work to be implemented in ROW and ECM not clear. - Overall technical impact is vague. Does not address security.
Preliminary Plan for Implementation	- Teams and sponsors clearly identified.	- Because the initial project is not completed, it is hard to evaluate the implementation for the phase 2 part of this project. It would appear, based on the comments in the executive summary, that strong project management needs to be put into place to ensure the deliverables are well defined and delivered in a timely manner. - Current project not completed scope of work not well defined. - No identification of plans.
Risk Assessment	- It looks like NDOR has a contingency plan to ensure that they are able to complete this project. - Reasonable description of possible barriers and good mitigation strategies identified.	- ROW projected not implemented and ECM work not defined.
Financial Analysis and Budget		- Not too much detail - these are pretty generic categories. - Without scope of work defined, cost cannot be estimated. Information provided is a ball park number? - Difficult to judge the financial aspect when technical impact is vague, but seems likely reasonable with the provided information.

TECHNICAL PANEL COMMENTS

Technical Panel Checklist	Yes	No	Unknown	Comments
1. Is the project technically feasible?				✓
2. Is the proposed technology appropriate for the project?				
3. Can the technical elements be accomplished within the proposed timeframe and budget?				

Nebraska Information Technology Commission

Project Proposal Form

Funding Requests
for Information Technology Projects

2015-2017 Biennial Budget

IMPORTANT NOTE: Project proposals should only be submitted by entering the information into the Nebraska Budget Request and Reporting System (NBRRS). The information requested in this Microsoft Word version of the form should be entered in the NBRRS in the "IT Project Proposal" section. The tabs in the "IT Project Proposal" section coincide with sections contained in this Microsoft Word version of the form. Information may be cut-and-pasted from this form or directly entered into the NBRRS. ALSO NOTE that for each IT Project Proposal created in the NBRRS, the submitting agency must prepare an "IT Issue" in the NBRRS to request funding for the project.

Project Title	**Nebraska eLearning Project**
Agency/Entity	**Nebraska Department of Education**

Notes about this form:

1. **USE.** The Nebraska Information Technology Commission ("NITC") is required by statute to "make recommendations on technology investments to the Governor and the Legislature, including a prioritized list of projects, reviewed by the technical panel..." Neb. Rev. Stat. § 86-516(8). "Governmental entities, state agencies, and noneducation political subdivisions shall submit all projects which use any combination of general funds, federal funds, or cash funds for information technology purposes to the process established by sections 86-512 to 86-524. The commission may adopt policies that establish the format and minimum requirements for project submissions." Neb. Rev. Stat. § 86-516(5). In order to perform this review, the NITC and DAS Budget Division require agencies/entities to complete this form when requesting funding for technology projects.
2. **WHICH TECHNOLOGY BUDGET REQUESTS REQUIRE A PROJECT PROPOSAL FORM?** See NITC 1-202 available at http://nitc.ne.gov/standards/. Attachment A to that document establishes the minimum requirements for project submission.
3. **COMPLETING THE FORM IN THE NEBRASKA BUDGET REQUEST AND REPORTING SYSTEM (NBRRS).** Project proposals should only be submitted by entering the information into the NBRRS. The information requested in this Microsoft Word version of the form should be entered in the NBRRS in the "IT Project Proposal" section. The tabs in the "IT Project Proposal" section coincide with sections contained in this Microsoft Word version of the form. Information may be cut-and-pasted from this form or directly entered into the NBRRS. ALSO NOTE that for each "IT Project Proposal" created in the NBRRS, the submitting agency must prepare an "IT Issue" in the NBRRS to request funding for the project.
4. **QUESTIONS.** Contact the Office of the CIO/NITC at (402) 471-7984 or ocio.nitc@nebraska.gov

General Information

Project Title	Nebraska eLearning Project
Agency (or entity)	Nebraska Department of Education

Contact Information for this Project:

Name	Brent Gaswick
Address	301 Centennial Mall S
City, State, Zip	Lincoln, Ne 68509
Telephone	402-471-3503
E-mail Address	Brent.gaswick@nebraska.gov

Executive Summary

Provide a one or two paragraph summary of the proposed project. This summary will be used in other externally distributed documents and should therefore clearly and succinctly describe the project and the information technology required.

Goals, Objectives, and Projected Outcomes (15 Points)

Project Overview: Nebraska eLearning Project

The Nebraska eLearning Project would center on the creation and procurement of high quality electronic learning objects for distribution to PreK-12 public schools at no cost to schools, in support of the statewide BlendEd Initiative, the NITC committee's digital education goals and as an enhancement to the Data Dashboard currently being developed by NDE, while providing an in-depth, hands-on professional development process for Nebraska teachers, pre-service teachers and content specific undergraduate students.

The eLearning Project would be led by the Nebraska Department of Education in partnership with ESUs, NET, the University of Nebraska System, State College system, PreK-12 schools and additional State of Nebraska agencies.

This program is an investment to help reduce costs for Nebraska PreK-12 school districts by providing a high quality, extensive library of electronic learning objects to schools at no cost.
Provide real-world job experience for college students from multiple disciplines.
Make available intense real-world professional development activities for fellowshipped teachers.
Facilitate coordination and expansion of exemplar projects and resources already being done in individual or regional settings to provide equitable educational opportunities statewide.

Participants:

Certified preK-12 educators

Pre-service education majors
Undergraduate computer science students/ IT students
Undergraduate graphic design students
Content specialists

Anticipated Partners:

NDE
ESUs
NET
University of Nebraska System
Nebraska State College System
Private College System
Community College System
Nebraska State Historical Society
Nebraska Library Commission
Nebraska Game and Parks
Network Nebraska

Goals:

Successfully integrate access to instructional content and professional development activities to student assessment data as part of an individualized learning platform. (Integrate the Data Dashboard with content).
Provide high quality learning objects, lessons or books equally to all Nebraska preK-12 schools at low cost or free of charge.
Develop and provide high quality professional development to current preK-12 Nebraska Educators and Pre-service education students.
Establish long term partnerships between preK-12 education, state agencies, post secondary institutions and ESUs

Measures of success:

Successful integration of a statewide Learning Object Repository system into the Data Dashboard system
Successful adoption of a state wide LOR system as part of Network Nebraska
Production and adoption of Nebraska aligned content for preK-12 schools
Successful adoption of statewide Meta tagging standardization guidelines
Explore utilization of a third party evaluation model such as Bright Bytes statewide

Deliverables:

Statewide Learning Object Repository
Nebraska specific Metadata standards guidelines
Nebraska specific Open Education Resources
High quality professional development resources

High quality learning objects
Post secondary internship experiences
Free learning objects, courses and instructional tools
24/7 365 access to learning
equity of access

Project Justification / Business Case (25 Points)

Project Breakdown

eLearning Project Director

To ensure the success of this project, it is proposed that 1.0 FTE be created and assigned to NDE as part of the Technology Learning Center Team. The eLearning Project Director would be the only position added to NDE as part of this project and would be responsible for oversight of the project in cooperation with the Director of the Network, Education and Technology team currently employed by NDE. Responsibilities of this position would include coordination with partner agencies, oversight of funding awarded to contracting agencies and project management. This position is a critical role in the project, because they will be charged with fostering and maintaining partnerships that will ultimately determine the success or failure of the project.

Tier 1 - Content Creation and procurement

This component of the project would need a physical office space dedicated to content creation work
OER adoption
Meta tagging standardization
Produced Content Procurement
Content Creation
- Gamification research and development
- Master course shells
- Learning objects
- Individual concept lessons

Content Creation Team
- 1 Fellowship teacher leader
- 1 Classroom teacher $500 incentive per item
- 1 Programing intern $10 per hour x 5 hours avg. = $50
- 1 Design intern $10 per hour x 5 hours avg. = $50
- 2 Pre-service intern $10 per hour x 5 hours avg. = $100

Average cost per content item = $700

Tier 2 - Professional Development

Fellowship program
- Partnership with post secondary institution(s), ESUs and school districts
- 5 or 6 Nebraska educators seeking a Master's degree

and on active sabbatical
- Duration of one year
- Each person receives $40,000 per year fellowship
- Help supervise content creation teams, develop professional development courses and provide in-person professional development trainings

Training development and inservice
- Develop high-quality Nebraska-focused professional development content for use by any Nebraska PreK-12 school, free of charge
- Provide on-site or regional professional development opportunities for educators at no cost to them or the district
- Money will go to site fees, stipends for teachers attending, materials and content development and hosting

Tier 3 - Integration and Support

Dashboard Integration:

Develop a process of integrating instructional content for students and educators into the Dashboard
Single sign-on support and adoption
Write customized API codes to allow communication between Dashboard and LOR
Identify and deploy hardware required to support successful integration
Statewide help desk support or development

Learning Object Repository:

Creation of advisory team to explore and recommend a statewide content repository solution (NDE, NET, ESUCC, PreK-12, Post-secondary)
Partner with Network Nebraska to provide the selected solution as a service of Network Nebraska to help develop a sustainable LOR system.

Technical Impact (20 Points)
Current Projects this will support:

Teacher/Principal Evaluation
A QuESTT- school accountability
Statewide Longitudinal Data system
Early Childhood initiatives, including Step Up to Quality
NeSA - state accountability
BlendEd Initiative
Career and Technical Education

**This list is just a small sample of the projects that would benefit from the Nebraska eLearning project. Ultimately, this project, if funded and deployed successfully, has the potential to impact all Nebraska learners, PreK-20, public, private or homeschool.*

Cost savings:

Reducing the number of LOR systems being implemented will result in cost savings to PreK-12 schools, ESUs and Nebraska State Agencies by allowing for single-point negotiations and reduction of per-user cost due to the scale of the project.

Development of a statewide LOR and high-quality content will reduce the need for school districts to purchase devices for students, as the access this project provides will allow for an expansion of "Bring your own device" programs. Students can access learning with their own devices anytime, anywhere.

With access to the LOR, schools will have access to a wide variety of high-quality, digital learning objects, ranging from digital textbooks to royalty-free graphics. This will save schools money by the reduction in the need to purchase these resources from a third party provider.

High quality digital professional development resources will reduce cost to districts in multiple ways; the first is the overall cost for the professional development content and instruction, second, it will allow the teacher to participate in high-quality professional content without leaving their classroom, which reduces district cost for substitutes.

In time, the State of Nebraska will build capacity for sustainability through a cadre of highly effective master teachers trained to effectively create Individualized Learning Environments for students which will provide their school districts with a local expert to help mentor other teachers without the need for bringing in expensive outside experts.

Preliminary Plan for Implementation (10 Points)

Proposed Project Timeline*

*The timeline anticipates one year of lead time prior to receiving actual funding. All dates are estimates and subject to change.

Prior to 2016:

Begin establishing needed partnerships for successful implementation of the eLearning project upon receiving funding.

2016-2017:

July

Hire Project Director at NDE
Make initial Fellowship awards
Award contracts to partnering agencies

August

Establish physical location for content creation and professional development activities
Establish LOR, OER and Metadata advisory groups

September

Begin work on OER, Meta tagging projects
Initial internship positions filled for content creation teams
Establish work group for data dashboard
Integration work

October - May

Development of custom content
Development of professional development content
Work on OER adoptions
Work on Meta tagging standards
Research on LOR

June

Select statewide LOR and begin deployment

2017-2018:

August
Provide Meta Tagging standards document statewide
Provide LOR system statewide
Deliver first round of OER, custom content and professional development on LOR

September - June

Continue OER, content creation, and professional development activities
Provide training to all partners on the new LOR, Meta tagging standards and content
Begin work on integration of LOR content with the Data Dashboard
Maintenance of support on LOR
Complete initial project evaluation

2018-2019:

Continue professional development activities and content development
Continue OER, content creation and adoption projects
Continue LOR utilization
Begin integrating LOR content with the Data Dashboard
Expand and complete second project evaluation

2019-2020:

Continue professional development activities and content development
Continue OER, content creation and adoption projects
Continue LOR utilization
Expand integration of LOR content with the Data Dashboard
Expand and complete third year project evaluation
Complete new project objectives and goals to guide the next four year project cycle.

12. Describe the ongoing support requirements.

Risk Assessment (10 Points)

LOR adoption has several risks associated with it. The first is reaching a consensus among the committee on a centralized solution which could cause the whole project to fail or a continuation of an environment where multiple LORs are adopted on a regional or local level. The careful selection of committee members from a variety of organizations, clearly defining that this system needs to be a statewide solution that is part of Network Nebraska and the direction of the Department of Education's eLearning Project Leader will help ensure that this project does in fact succeed.

The cost of the LOR system is another area of risk as unforeseen problems and costs could be pushed outside the budgeted amount. The committee's provision of clear expectations for the system and adherence to the proper NITC RFP protocols will keep the cost of the system in line with expectations and ensuring that the system is effective.

Successfully creating and sustaining a partnership between all parties needed for this project will be a major risk. The need for a single person to coordinate and lead this partnership will be essential to this project. The NDE eLearning Project director position will be charged with making sure that this risk is mitigated and the project is successful by sharing a single vision with all partners and overseeing and reporting on the project at all levels

Financial Analysis and Budget (20 Points)

15. Financial Information

The "Financial" information tab in the Nebraska Budget Request and Reporting System (NBRRS) is used to enter the financial information for this project (NOTE: For each IT Project Proposal created in the NBRRS, the submitting agency must prepare an "IT Issue" in the NBRRS to request funding for the project.)

Worksheet in Project Proposal Form.xls

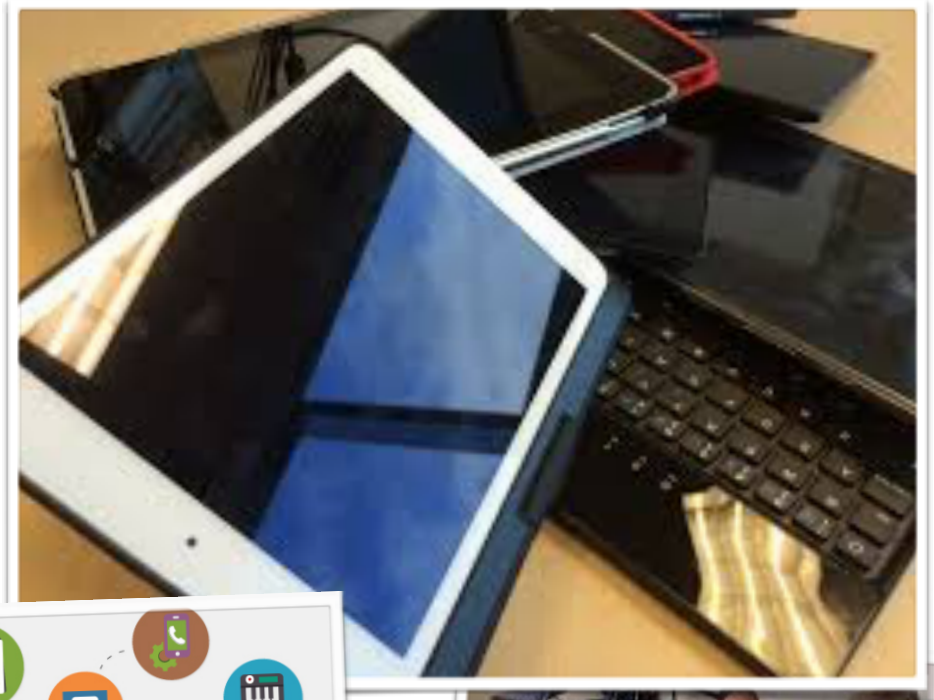
Nebraska Information Technology Commission
Project Proposal Form
Section 8: Financial Analysis and Budget

(Revise dates as necessary for your request.)

	Estimated Prior Expended	Request for FY2016 (Year 1)	Request for FY2017 (Year 2)	Request for FY2018 (Year 3)	Request for FY2019 (Year 4)	Future	Total
1. Personnel Costs		$ 88,000.00	$ 90,000.00	$ 92,000.00	$ 94,000.00		$ 364,000.00
2. Contractual Services							
2.1 Design							$ -
2.2 Programming							$ -
2.3 Project Management							$ -
2.4 Other							$ -
3. Supplies and Materials							$ -
4. Telecommunications							$ -
5. Training							$ -
6. Travel							$ -
7. Other Operating Costs		$ 2,500,000.00	$ 2,500,000.00	$ 2,500,000.00	$ 2,500,000.00		$ 10,000,000.00
8. Capital Expenditures							
8.1 Hardware							$ -
8.2 Software							$ -
8.3 Network							$ -
8.4 Other							$ -
TOTAL COSTS	$ -	$ 2,588,000.00	$ 2,590,000.00	$ 2,592,000.00	$ 2,594,000.00	$ -	$ 10,364,000.00
General Funds		$ 2,607,000.00	$ 2,607,000.00	$ 2,607,000.00	$ 2,607,000.00		$ 10,428,000.00
Cash Funds							$ -
Federal Funds							$ -
Revolving Funds							$ -
Other Funds							$ -
TOTAL FUNDS	$ -	$ 2,607,000.00	$ 2,607,000.00	$ 2,607,000.00	$ 2,607,000.00	$ -	$ 10,428,000.00

Nebraska Department of Education
November 7, 2014

Nebraska eLearning Project



Systems of Support for all Nebraska learners

NEBRASKA DEPARTMENT OF EDUCATION

Nebraska eLearning Project

A cooperative effort to support personalized learning for all Nebraska learners

The Nebraska Department of Education is requesting additional budget authority to support the Technology Learning Center's mission under Nebraska statutory authority: Sections 79-1302, 79-1303, 79-1304, 79-1305, 79-1306, 79-1307 and 79-1310.

The Technology Learning Center was established to serve the State of Nebraska's PreK-12 schools with the following goals, and objectives:

- *To provide clearinghouse services for information concerning current technology projects as well as software and hardware development*
- *To serve as a demonstration site for state-of-the-art hardware appropriate to an educational setting*
- *To provide technical assistance to educators in working with hardware and software*
- *To provide in-service and pre-service training for educators, in conjunction with other public and private educational entities, in the use of computers, telecommunications, and other electronic technologies appropriate to an educational setting*
- *To sponsor activities which promote the use of technology in the classroom*
- *To serve as a liaison between business and education interests in technology communication*
- *To experiment with various applications or technology in education*
- *To assist schools in planning for and selecting appropriate technologies*
- *To design, implement, and evaluate pilot projects to assess the usefulness of technologies in school management, curriculum, instruction, and learning*
- *To seek partnerships with the Nebraska Educational Telecommunications Commission, the University of Nebraska, the state college system, educational service units, the Nebraska Library Commission, and other public and private entities in order to make effective use of limited resources*
- *To encourage sharing among school districts to deliver cost-efficient and effective distance learning*
- *To establish an electronic data network and access to appropriate databases for learners and educators through purchase of necessary hardware, software, and licenses for national data bases. The center shall provide assistance to schools for training communication costs and, through work with Nebraska educators and learners, shall develop state-level databases*
- *To identify, evaluate, and disseminate information on school projects which have the potential to enhance the quality of instruction or learning.*

The Technology Learning Center exists in statute and with 1.5 staff members, there is no funding assigned to the Technology Center to carry out any work. The Nebraska eLearning Project proposal is intended to provide the Technology Center with funding to work with partners in order to carry out its charge.

Project Overview: Nebraska eLearning Project

The Nebraska eLearning Project would center on the creation and procurement of high quality electronic learning objects for distribution to PreK-12 public schools at no cost to schools, in support of the statewide BlendEd Initiative, the NITC committee's digital education goals and as an enhancement to the Data Dashboard currently being developed by NDE, while providing an in-depth, hands-on professional development process for Nebraska teachers, pre-service teachers and content specific undergraduate students.

The eLearning Project would be led by the Nebraska Department of Education in partnership with ESUs, NET, the University of Nebraska System, State College system, PreK-12 schools and additional State of Nebraska agencies.

- This program is an investment to help reduce costs for Nebraska PreK-12 school districts by providing a high quality, extensive library of electronic learning objects to schools at no cost.
- Provide real-world job experience for college students from multiple disciplines.
- Make available intense real-world professional development activities for fellowshipped teachers.
- Facilitate coordination and expansion of exemplar projects and resources already being done in individual or regional settings to provide equitable educational opportunities statewide.

Participants:

- Certified preK-12 educators
- Pre-service education majors
- Undergraduate computer science students/ IT students
- Undergraduate graphic design students
- Content specialists

Anticipated Partners:

- NDE
- ESUs
- NET
- University of Nebraska System
- Nebraska State College System
- Private College System
- Community College System
- Nebraska State Historical Society
- Nebraska Library Commission
- Nebraska Game and Parks
- Network Nebraska

NeBooks Project

The current NeBooks Project that is being facilitated by NDE is just one example of the content creation that can be achieved through this project. Currently, the NeBooks Project is an unfunded voluntary effort on the part of multiple state agencies, ESUs, and schools.

The participants create custom eBooks and provide them free of charge to anyone in the state that would like to use them. If the eLearning project was funded, this program could be quickly expanded to provide additional high quality eBooks to Nebraska schools free of charge. This funding would result in cost savings for districts in material procurement costs, and also provide a rich source of learning objects for students to explore and learn from independently.

To find out more visit:
http://www.education.ne.gov/nebooks/

Goals:

- Successfully integrate access to instructional content and professional development activities to student assessment data as part of an individualized learning platform. (Integrate the Data Dashboard with content).
- Provide high quality learning objects, lessons or books equally to all Nebraska preK-12 schools at low cost or free of charge.
- Develop and provide high quality professional development to current preK-12 Nebraska Educators and Pre-service education students.
- Establish long term partnerships between preK-12 education, state agencies, post secondary institutions and ESUs

Intel Teach Elements

The Nebraska Department of Education and the ESUCC cooperatively obtained a grant from Intel to implement the Intel Teach Elements courses in Nebraska. The grant was provided by Intel for the customization of the courses to fit Nebraska standards, to deploy the courses in an LMS environment accessible across the state, and to develop a cadre of trainers. These courses are free professional development courses for Nebraska educators provided in multiple formats from facilitated to self-paced online. Through the eLearning Project , NDE would work with multiple partners to individualize free content and develop Nebraska content for teachers to learn how to effectively implement personalized learning in their classrooms.

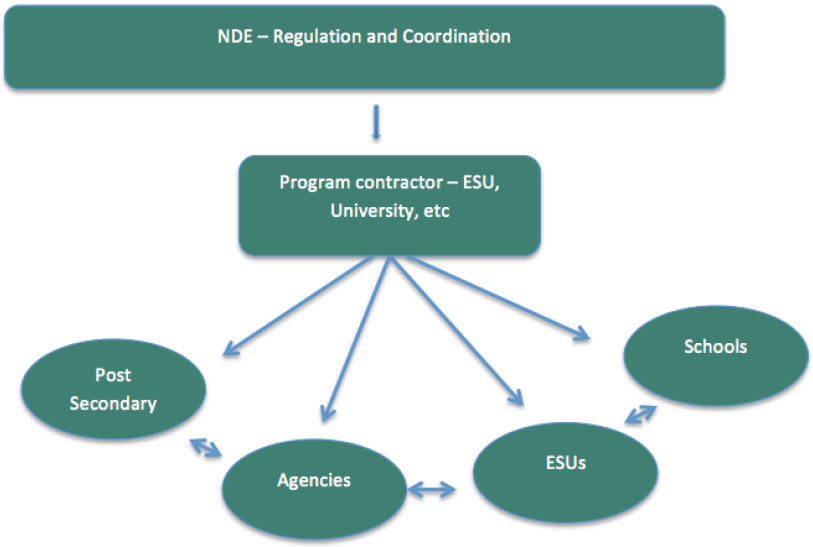
Measures of success:

•Successful integration of a statewide Learning Object Repository system into the Data Dashboard system
•Successful adoption of a state wide LOR system as part of Network Nebraska
•Production and adoption of Nebraska aligned content for preK-12 schools
•Successful adoption of statewide Meta tagging standardization guidelines
•Explore utilization of a third party evaluation model such as Bright Bytes statewide

Deliverables:

•Statewide Learning Object Repository
•Nebraska specific Metadata standards guidelines
•Nebraska specific Open Education Resources
•High quality professional development resources
•High quality learning objects
•Post secondary internship experiences
•Free learning objects, courses and instructional tools
•24/7 365 access to learning
•equity of access

Organizational Structure of Project:



Open Educational Resources (OER) are freely accessible, openly licensed documents and media that are useful for teaching, learning, and assessing as well as for research purposes. Although some people consider the use of an open file format to be an essential characteristic of OER, this is not a universally acknowledged requirement.

The OER portion of this project will be to find high quality OER content already available and align it to Nebraska State Standards and brand it as a Nebraska resource to help students connect with it.

Anticipated Costs:

Year 1 (2016-2017)

eLearning Director	$88,000
Metadata Standardization	$75,000
OER Adoption	$180,000
Content Creation	$250,000
Content Procurement	$110,000
Professional Development	$300,000
LOR Project	$1.2 million
Dashboard Integration	$300,000
Project Offices	$90,000
Misc	$14,000

Year 2 (2017-2018)

eLearning Director	$90,000
Metadata Standardization	$10,000
OER Adoption	$180,000
Content Creation	$285,000
Content Procurement	$150,000
Professional Development	$320,000
LOR Project	$700,000
Dashboard Integration	$800,000
Project Offices	$50,000
Evaluation	$10,000
Misc	$12,000

Year 3 (2018-2019)

eLearning Director……$92,000
Metadata Standardization……..$5,000
OER Adoption……$175,000
Content Creation……$290,000
Content Procurement……$150,000
Professional Development……$300,000
LOR Project……..$300,000
Dashboard Integration……...$1.2 million
Project Offices……$50,000
Evaluation……..$30,000
Misc……$15,000

Year 4 (2019-2020)

*(complete revaluation of project needs would be done during this year)**

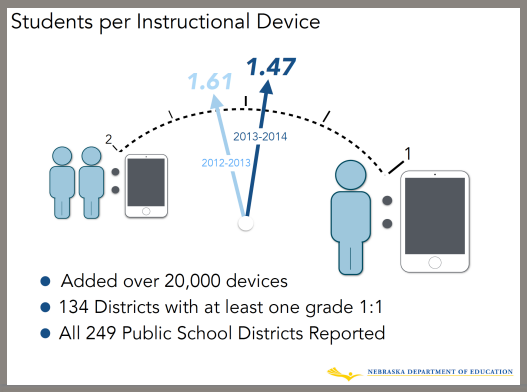
eLearning Director……$94,000
Metadata Standardization..……....$0
OER Adoption……$180,000
Content Creation……$300,000
Content Procurement……$260,000
Professional Development……$300,000
LOR Project……..$150,000
Dashboard Integration……...$1.2 million
Project Offices……....$50,000
Evaluation……...$60,000
Misc……$13,000

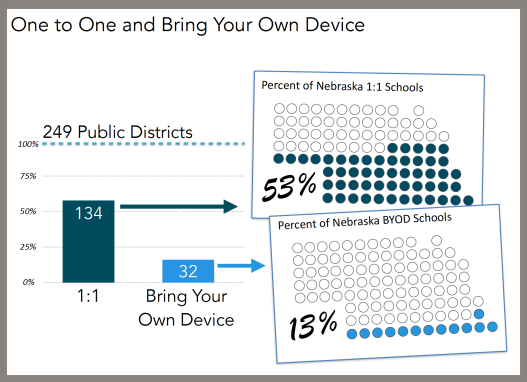
**Yearly reports will be made available to the public as to the use of funds as part of this project. An advisory group made up of representatives from the project partners will meet yearly to discuss project directions and to adjust goals, budgets and needs to be met as part of the project.*

Hardware vs. Content

Nebraska schools have made an effort to purchase devices for students to use as indicated in the graphics showing Instructional Devices per student and 1:1 adoptions in the state.

Often times for schools, after spending money for the hardware, they don't have enough money for content to use with the devices. Free content, while widely available, is often difficult to find and organize for teachers and students. The Nebraska eLearning Project would help solve this by providing high quality digital content free of charge to the district in a single location.



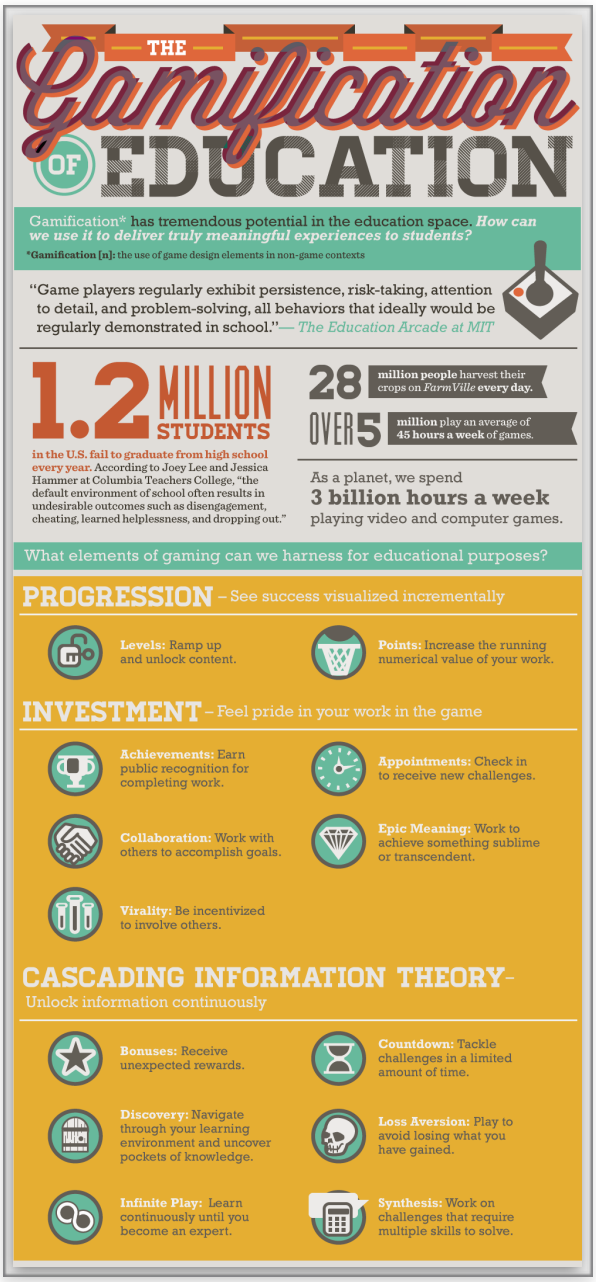


graphics created from 2013-2014 Technology Planning document data

Project Breakdown

eLearning Project Director

To ensure the success of this project, it is proposed that 1.0 FTE be created and assigned to NDE as part of the Technology Learning Center Team. The eLearning Project Director would be the only position added to NDE as part of this project and would be responsible for oversight of the project in cooperation with the Director of the Network, Education and Technology team currently employed by NDE. Responsibilities of this position would include coordination with partner agencies, oversight of funding awarded to contracting agencies and project management. This position is a critical role in the project, because they will be charged with fostering and maintaining partnerships that will ultimately determine the success or failure of the project.



Tier 1 - Content Creation and procurement

- This component of the project would need a physical office space dedicated to content creation work
- OER adoption
- Meta tagging standardization
- Produced Content Procurement
- Content Creation
  - Gamification research and development
  - Master course shells
  - Learning objects
  - Individual concept lessons

Content Creation Team
- 1 Fellowship teacher leader
- 1 Classroom teacher $500 incentive per item
- 1 Programing intern $10 per hour x 5 hours avg. = $50
- 1 Design intern $10 per hour x 5 hours avg. = $50
- 2 Pre-service intern $10 per hour x 5 hours avg. = $100

Average cost per content item = $700

Tier 2 - Professional Development

- Fellowship program
  - Partnership with post secondary institution(s), ESUs and school districts
  - 5 or 6 Nebraska educators seeking a Master's degree and on active sabbatical
  - Duration of one year
  - Each person receives $40,000 per year fellowship
  - Help supervise content creation teams, develop professional development courses and provide in-person professional development trainings

- Training development and inservice
  - Develop high-quality Nebraska-focused professional development content for use by any Nebraska PreK-12 school, free of charge
  - Provide on-site or regional professional development opportunities for educators at no cost to them or the district
  - Money will go to site fees, stipends for teachers attending, materials and content development and hosting

Personalized learning is the tailoring of pedagogy, curriculum, and learning environments by learners or for learners in order to meet their different learning needs and aspirations. Typically, technology is used to facilitate personalized learning environments.

Tier 3 - Integration and Support

Dashboard Integration:

- Develop a process of integrating instructional content for students and educators into the Dashboard
- Single sign-on support and adoption
- Write customized API codes to allow communication between Dashboard and LOR
- Identify and deploy hardware required to support successful integration
- Statewide help desk support or development

Learning Object Repository:

- Creation of advisory team to explore and recommend a statewide content repository solution (NDE, NET, ESUCC, PreK-12, Post-secondary)
- Partner with Network Nebraska to provide the selected solution as a service of Network Nebraska to help develop a sustainable LOR system.

Proposed Project Timeline*

*The timeline anticipates one year of lead time prior to receiving actual funding. All dates are estimates and subject to change.

Prior to 2016:

- Begin establishing needed partnerships for successful implementation of the eLearning project upon receiving funding.

2016-2017:

July

- Hire Project Director at NDE
- Make initial Fellowship awards
- Award contracts to partnering agencies

August

- Establish physical location for content creation and professional development activities
- Establish LOR, OER and Metadata advisory groups

September

- Begin work on OER, Meta tagging projects
- Initial internship positions filled for content creation teams
- Establish work group for data dashboard
- Integration work

October - May

- Development of custom content
- Development of professional development content
- Work on OER adoptions
- Work on Meta tagging standards
- Research on LOR

June

- Select statewide LOR and begin deployment

2017-2018:

August

- Provide Meta Tagging standards document statewide
- Provide LOR system statewide
- Deliver first round of OER, custom content and professional development on LOR

September - June

- Continue OER, content creation, and professional development activities
- Provide training to all partners on the new LOR, Meta tagging standards and content
- Begin work on integration of LOR content with the Data Dashboard
- Maintenance of support on LOR
- Complete initial project evaluation

2018-2019:

- Continue professional development activities and content development
- Continue OER, content creation and adoption projects
- Continue LOR utilization
- Begin integrating LOR content with the Data Dashboard
- Expand and complete second project evaluation

2019-2020:

- Continue professional development activities and content development
- Continue OER, content creation and adoption projects
- Continue LOR utilization
- Expand integration of LOR content with the Data Dashboard
- Expand and complete third year project evaluation
- Complete new project objectives and goals to guide the next four year project cycle.

Curricular Benefits

The content creation and procurement money will be able to provide instructional content ranging from early childhood to college and specific to Nebraska state standards and needs for all subject areas from core curriculum areas, high needs areas, special education, and gifted education.

Content Creation Priorities

1. STEM Content
2. Nebraska Studies
3. Core curriculum
4. All other areas

Current Projects this will support:

- Teacher/Principal Evaluation
- A QuESTT- school accountability
- Statewide Longitudinal Data system
- Early Childhood initiatives, including Step Up to Quality
- NeSA - state accountability
- BlendEd Initiative
- Career and Technical Education

**This list is just a small sample of the projects that would benefit from the Nebraska eLearning project. Ultimately, this project, if funded and deployed successfully, has the potential to impact all Nebraska learners, PreK-20, public, private or homeschool.*

Cost savings:

Reducing the number of LOR systems being implemented will result in cost savings to PreK-12 schools, ESUs and Nebraska State Agencies by allowing for single-point negotiations and reduction of per-user cost due to the scale of the project.

Development of a statewide LOR and high-quality content will reduce the need for school districts to purchase devices for students, as the access this project provides will allow for an expansion of "Bring your own device" programs. Students can access learning with their own devices anytime, anywhere.

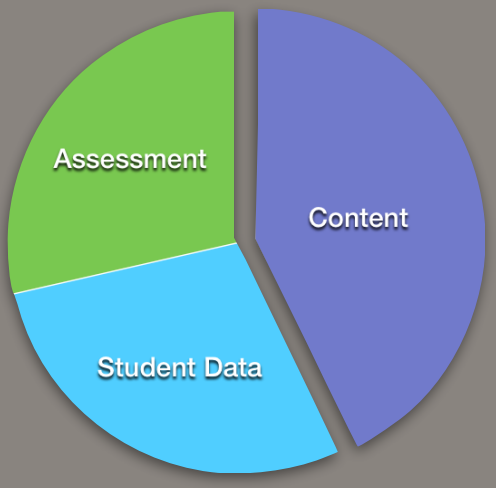
With access to the LOR, schools will have access to a wide variety of high-quality, digital learning objects, ranging from digital textbooks to royalty-free graphics. This will save schools money by the reduction in the need to purchase these resources from a third party provider.

High quality digital professional development resources will reduce cost to districts in multiple ways; the first is the overall cost for the professional development content and instruction, second, it will allow the teacher to participate in high-quality professional content without leaving their classroom, which reduces district cost for substitutes.

In time, the State of Nebraska will build capacity for sustainability through a cadre of highly effective master teachers trained to effectively create Individualized Learning Environments for students which will provide their school districts with a local expert to help mentor other teachers without the need for bringing in expensive outside experts.

Dashboard Integration

Each component of this project is essential in having a long-term and lasting impact on student learning and success in Nebraska. The content creation and procurement portion of the project is important to assure all students and educators have equitable access to quality educational content to learn with and from. The LOR is imperative to help provide this equity of access regardless of geographical location or size of school. The dashboard integration is the final piece of the puzzle for school personnel trying to make learning truly personal for students. It will connect student assessment data with school level data and content tailored to the individual student's learning needs, into one location in real time for the teachers to see and provide to students.



Risk Assessment

LOR adoption has several risks associated with it. The first is reaching a consensus among the committee on a centralized solution which could cause the whole project to fail or a continuation of an environment where multiple LORs are adopted on a regional or local level. The careful selection of committee members from a variety of organizations, clearly defining that this system needs to be a statewide solution that is part of Network Nebraska and the direction of the Department of Education's eLearning Project Leader will help ensure that this project does in fact succeed.

The cost of the LOR system is another area of risk as unforeseen problems and costs could be pushed outside the budgeted amount. The committee's provision of clear expectations for the system and adherence to the proper NITC RFP protocols will keep the cost of the system in line with expectations and ensuring that the system is effective.

Successfully creating and sustaining a partnership between all parties needed for this project will be a major risk. The need for a single person to coordinate and lead this partnership will be essential to this project. The NDE eLearning Project director position will be charged with making sure that this risk is mitigated and the project is successful by sharing a single vision with all partners and overseeing and reporting on the project at all levels

Definitions:

Open Educational Resources (OER)
Freely accessible, openly licensed documents and media that are useful for teaching, learning, and assessing, as well as for research purposes. Although some people consider the use of an open file format to be an essential characteristic of OER, this is not a universally acknowledged requirement.

Metadata
The main purpose of metadata is to facilitate in the discovery of relevant information, more often classified as resource discovery. Metadata also helps organize electronic resources, provide digital identification, and helps support archiving and preservation of the resource. Metadata assists in resource discovery by "allowing resources to be found by relevant criteria, identifying resources, bringing similar resources together, distinguishing dissimilar resources, and giving location information."

Learning Object Repository (LOR)
A type of digital library that enables educators to share, manage and use educational resources.

Application Programming Interface (API)
An API is a software intermediary that makes it possible for application programs to interact with each other and share data. It's often an implementation of REST that exposes a specific software functionality while protecting the rest of the application.

For further information Contact:

Brent Gaswick
Director Network, Education and Technology Team
NDE
(402) 471-3503
brent.gaswick@nebraska.gov

Nebraska Information Technology Commission

Project Proposal Form

Funding Requests
for Information Technology Projects

2015-2017 Biennial Budget

IMPORTANT NOTE: Project proposals should only be submitted by entering the information into the Nebraska Budget Request and Reporting System (NBRRS). The information requested in this Microsoft Word version of the form should be entered in the NBRRS in the "IT Project Proposal" section. The tabs in the "IT Project Proposal" section coincide with sections contained in this Microsoft Word version of the form. Information may be cut-and-pasted from this form or directly entered into the NBRRS. ALSO NOTE that for each IT Project Proposal created in the NBRRS, the submitting agency must prepare an "IT Issue" in the NBRRS to request funding for the project.

Project Title	**Education Data Systems Capacity Building**
Agency/Entity	**Nebraska Dept. of Education**

Notes about this form:

1. **USE.** The Nebraska Information Technology Commission ("NITC") is required by statute to "make recommendations on technology investments to the Governor and the Legislature, including a prioritized list of projects, reviewed by the technical panel..." Neb. Rev. Stat. § 86-516(8). "Governmental entities, state agencies, and noneducation political subdivisions shall submit all projects which use any combination of general funds, federal funds, or cash funds for information technology purposes to the process established by sections 86-512 to 86-524. The commission may adopt policies that establish the format and minimum requirements for project submissions." Neb. Rev. Stat. § 86-516(5). In order to perform this review, the NITC and DAS Budget Division require agencies/entities to complete this form when requesting funding for technology projects.
2. **WHICH TECHNOLOGY BUDGET REQUESTS REQUIRE A PROJECT PROPOSAL FORM?** See NITC 1-202 available at http://nitc.ne.gov/standards/. Attachment A to that document establishes the minimum requirements for project submission.
3. **COMPLETING THE FORM IN THE NEBRASKA BUDGET REQUEST AND REPORTING SYSTEM (NBRRS).** Project proposals should only be submitted by entering the information into the NBRRS. The information requested in this Microsoft Word version of the form should be entered in the NBRRS in the "IT Project Proposal" section. The tabs in the "IT Project Proposal" section coincide with sections contained in this Microsoft Word version of the form. Information may be cut-and-pasted from this form or directly entered into the NBRRS. ALSO NOTE that for each "IT Project Proposal" created in the NBRRS, the submitting agency must prepare an "IT Issue" in the NBRRS to request funding for the project.
4. **QUESTIONS.** Contact the Office of the CIO/NITC at (402) 471-7984 or ocio.nitc@nebraska.gov

General Information

Project Title	Education Data Systems Capacity Building
Agency (or entity)	Nebraska Dept. of Education

Contact Information for this Project:

Name	Dean Folkers
Address	301 Centennial Mall South
City, State, Zip	Lincoln, NE 68509
Telephone	402-471-4740
E-mail Address	Dean.folkers@nebraska.gov

Executive Summary

The recent Nebraska Education Data Systems study, in response to Legislative Resolution 264, found that Nebraska spends an estimated $100 million annually for technology systems, software systems, and accountability data submissions by the public school districts and the Nebraska Department of Education (NDE). The systems and applications are largely focused on satisfying Federal and State accountability reporting requirements and do not directly contribute to supporting teaching and learning. The districts submit annual collections of data to support accountability to the state using a combination of automated and manual methods. An estimated 655,200 hours are spent by districts preparing the required collections for each year's accountability data submission.

Each district has selected its own set of administrative, teaching and learning, and back office applications and there is a large disparity in the number of applications available in small districts versus larger districts due to budget, staff, and capacity. Outside of Nebraska's largest districts, the digital tools are poorly integrated, there is little support for data-driven decision-making, and modern tools are not available to support instructional improvement necessary for the state's education initiatives of blended learning, teacher and principal evaluation, career readiness, and continuous school improvement.

Nebraska's network of Educational Service Units (ESUs), the ESU Coordinating Council (ESUCC), and Network Nebraska are all contributing to improving the capabilities and the efficiencies of the data systems for the districts. However, the coordination, support, and access for systems can be dramatically improved and serves as the basis for this multi-faceted approach to develop a statewide data system that builds long-term capacity, efficacy, and efficiency for the system of education. The study established 10 recommendations that included five work streams; leverage work conducted using the federal $4.3 million SLDS grant scheduled to end June 2015.

The proposed implementation roadmap for the Nebraska Education Data System estimates a three-year investment of $41,960,110, roughly evenly split across the three years. The rollout plan targets a phase in process over three years that could include 50 districts the first year, 150 the second year, and 245 during the third year resulting in cost savings and efficiencies that will also provide a financial return from substantially-reduced accountability costs and from reduced technology costs to districts. The projected cumulative net return for the investment over five years is $44.8 million. However, the primary benefits from the recommended investments will come from a greatly improved instructional system that improves student performance leading to greater student success.

Goals, Objectives, and Projected Outcomes (15 Points)

1. Describe the project, including:
   - Specific goals and objectives;

The following goals are established based on the recommendations from the Education Data System study and provide the basis for the creation of the five work streams.

.

Goal 1: Make security, privacy, transparency, and the proper use of data the core of the Nebraska Education Data System implementation.

Districts should continue to "own" their data within the statewide system. The ESU hosting must support enterprise-grade security with yearly independent security audits. The following tenets are recommended to protect privacy while ensuring proper use of student data:

1. Ensure that all agencies, organizations, contractors, and vendors that have access to student education records provide the same strength of protection, control, and transparency as codified in appropriate policies, contracts, and data sharing agreements.
2. Ensure that all persons that have access to student education records have training and certification (micro credentials) on the proper use and protection of education records.
3. Limit access to individual student education records to the minimal set of personnel essential for legitimate education purposes, for the shortest period of time required for that purpose, and to the smallest set of data required for that purpose.
4. To the maximum extent possible, use aggregate data and de-identified data in place of individual student education records.
5. Provide parents transparency into the sources and uses of student data.
6. Provide parents control of the child's education record to the maximum extent that is possible while preserving legitimate educational use of that data.

Goal 2: Unify the data collection requirements into the Nebraska Education Data Standards (NEDS) to minimize the reporting burden on districts.

Replace the current system of accountability data submissions by instead deriving accountability data from an extended set of data sent securely by district systems into the Nebraska Education Data System (NEDS). The system would move the computations and business rule checks to the state level for better efficiency and consistency while also providing a transparent facility for district review and approval.

Goal 3: Require application vendors and other sources to provide data in a standard form specified by NDE directly into the NEDS. Adopt a Nebraska Education Data Standard in collaboration with the NITC.

Native vendor interfaces are required for sustainability. Ed-Fi defined CEDS-compliant data standard adopted in 24 states that can be extended for Nebraska-specific requirements. Ed-Fi adoption preserves district choice while maintaining data standardization at the state level. A governance process will be required to maintain the Nebraska-extended version of Ed-Fi year-to-year.

Note that to ensure continued vendor participation, the data interface requirement needs to be in policy or legislation to ensure vendor compliance.

Goal 4: Leverage and strengthen Nebraska's ESU network, the ESUCC, and Network Nebraska to host, maintain, and sustain the Nebraska Education Data System, to support a statewide virtual help desk, and to train the educators in it is use.

Provide an enterprise-grade, efficient and economical technology platform through which applications and services are delivered to improve school performance and learner outcomes. The statewide system of support would leverage the resources at NDE, ESUCC, ESUs and districts to provide help desk support to districts and professional development coordination.

Goal 5: Leverage the state-level market to influence vendors, negotiate lower prices through competition, provide consistent functions and pricing across large and small districts, and expand the number and quality of instructional applications.

Facilitate "economies of scale" and cooperative purchasing at the state and/or ESU level and centralized services that lower costs without sacrificing the quality of products and services. Use this leverage to greatly expand the number and quality of instructional improvement applications.

The strategy is to create essentially an "application store" for school districts to choose from that leverages the collective bargaining advantage of 245 schools districts, 300,000 students, ESU resources and the Nebraska Department of Education.

Goal 6: Invest in providing education intelligence - access to actionable insight - through a warehouse, business intelligence tools, and increased internal capacity for districts, policy makers, and researchers.

Leverage the Ed-Fi K-12 statewide longitudinal date warehouse for use by districts, administrators, and researchers to support analysis of student performance, college and career readiness and success, instructional improvement initiatives, teacher evaluations, student intervention and professional development effectiveness. Integrate finance data, early childhood, postsecondary and workforce data.

Goal 7: Invest in an integrated data system that spans the districts, the ESUs, and NDE to support continuous education improvement.

The resulting Nebraska Education Data System (NEDS) should build upon the ongoing SLDS project to leverage the Ed-Fi data standards and technologies for the data system and dashboards. The system should adopt and build upon the ESUCC project for Single Sign-On (SSO). While the system will initially focus on serving the districts, it should ultimately be expanded to reach students and parents, community service organizations, and researchers.

Goal 8: Integrate staff data from district and state data sources, link teachers to student performance and success, and add additional data to better support teacher evaluation and professional development.

This will require integration of both the HR and SIS at the district level with the Teacher Certification and NPERS at the state level. Teachers will be linked to students to assess their contribution to student performance and growth. Additional data will be integrated for teacher evaluations and observations, survey data, and professional development.

Goal 9: Invest in the licensing, integration and training of an Instructional Improvement System that is cost-effective for districts of all sizes.

The system will include the critical digital assets and tools to support areas like learning management systems, content management systems, blended and online learning, teacher/principal evaluation system, school improvement and climate tools, career readiness and discovery, local assessment systems, and other tools to enhance the educational opportunities and experiences.

Goal 10: Develop the staff and processes necessary to sustain the Nebraska Education Data System.

Additional leadership positions are recommended and include a K-12 Chief Information Officer and Chief Privacy Officer at NDE. The recommended initiative will expand an emerging project management office. Additional data governance processes will be required. Additional technical staff will be required at NDE and in the ESUs to meet the statewide help desk and support requirements.

Overall, the goals have been organized into five work streams:

1. Nebraska Education Infrastructure / Leveraged Capacity –

Leverage an open-source education data standard along with accompanying technical assets – student-level dashboards for teachers and secure data warehouses for reporting. Developing the Nebraska Education Data Standard – will mean a set of data standards for interoperability of systems. This work will also include the infrastructure to support a major data system, including a single sign on offering from the ESUCC. leverage the Ed-Fi infrastructure to connect source systems and drive down costs.

2. Automated Collections –

Reduce reporting burden by providing efficiency and automation for data submissions through the leveraged secure data infrastructure and support. The implementation of the transactional API among the applications significantly reduces the reporting burden.

3. NDE Education Intelligence System / Actionable Insight --

Targeted resources, once expended on data submission, can be directed to effectively using Nebraska's data system and ensuring privacy and security of the data. The educational insight will include the ADVISER Dashboard, data warehouse, and other longitudinal analysis that would inform both policy and practice. to provide access to actionable insight – through a warehouse, business intelligence tools, and increased internal capacity.

4. Help Desk & Support –

Collaborate to include Training and Help Desk support around the systems—statewide. The cooperative support would provide opportunities for NDE, ESUCC and others to coordinate assistance using a tiered ticketing system, knowledge transfer, and professional development for data use.

5. Nebraska Instructional Improvement System –

Leverage the interoperability of the data standard and the state "buying power" to support an Instructional Improvement System. The creation of an "app store" would provide low cost or free options for school districts to choose applications that support digital system access and data integration—for all districts in Nebraska.

- **Expected beneficiaries of the project; and**

School Districts and local communities, Educational Service Units, Multiple Government Agencies, postsecondary education, and ultimately students are the primary beneficiaries of the projects. Reducing the reporting burden of districts, provided secure and near real time access to insightful metrics and information assist school districts required to submit and use data daily. The support systems and coordination of the ESUCC and NDE provide wrap around efforts to efficiently provide resources to schools in Nebraska. Increasing the data quality and timeliness of the data collection provides opportunities for research and evaluation into policy and supports innovative understanding of practice. Alignment to postsecondary education, P-20, workforce, and other critical systems in Nebraska provide unique opportunities to effectively provide insight that support opportunities for secure management of the information ensuring the protection of student privacy while empowering access for all Nebraska students to thrive.

- **Expected outcomes.**

An integrated, sustainable, and comprehensive systems approach to support local control while leveraging the capacity of continuity, efficiency, and equitable access to technological tools of efficiency is primary overarching expected outcomes.

In addition, the reduction of reporting burden using the current methods of collection, while increasing the quality and timeliness of the data increases the opportunities to effectively use information for all schools in Nebraska.

Lower costs, leveraging the capacity of the state for systems is an outcome realized for all districts.

Integrated data systems that support a Nebraska Education Data Standard provide a clear expectation for districts and third party vendors what the expectations are in Nebraska support a base of continuity and allow for innovation and cost savings.

Increased focus on student data privacy, security and transparency.

2. Describe the measurement and assessment methods that will verify that the project outcomes have been achieved.

The multiple aspects of the systems include a number of measurements to ensure completion and ongoing continuous improvement and evaluation. The primary measures will be a reduced burden of reporting data for the use at the lowest level and an increase in the use of the data to inform policy and practice.

In addition, the following measurements are examples of metrics established to measure and assess the project outcomes.

1. Security audit, policies, practices, and supports for school districts conducted annually to ensure system and mechanisms adhere to established expectations, rules, and policies.

2. A Nebraska Education Data Standard is established and adopted. Supporting mechanisms for oversight and governance

3. Decrease the number of human-hours on process of submitting data by 50% over three years through automated API secure technologies.

4. By year 3 of the implementation, all 245 school districts are connected to the system and have secure access to the resources created.

Additional multiple measures and metrics that included the comprehensive integration and of the entire project will a mission critical focus of the project work and connected to the performance management system of staff associated with the projects.

3. Describe the project's relationship to your agency comprehensive information technology plan.

The project is at the core of the information agencies technology plan and represents a critical path moving forward to support effective schools, changes in Nebraska accountability, and efficiencies to ensure effective use of financial and human resources while at the same time ensuring equitable opportunities for all school districts in Nebraska.

Project Justification / Business Case (25 Points)

4. Provide the project justification in terms of tangible benefits (i.e. economic return on investment) and/or intangible benefits (e.g. additional services for customers).

ESTIMATED FINANCIAL RETURNS
The primary benefits from the recommended investments will come from a greatly improved instructional system that improves student performance leading to greater student success. However the proposed approach also results in cost savings and efficiencies that will provide a financial return from substantially-reduced accountability costs and from reduced technology costs to districts.

REDUCED ACCOUNTABILITY COSTS
Accountability costs will be reduced by unifying and moving accountability computations to state from a single fine-grained data collection. An estimated 455 FTEs are involved in the current data collection process at districts, representing an annual cost of $22.75 million. NDE spends an additional $2.5M per year on licensing, IT personnel and help desk supporting the accountability submissions. The recommended NEDS, when fully implemented, can re-direct at an estimated 50% of the district FTE time related to accountability submissions to focus on other initiatives that impact can more directly improve student performance and success. This value is estimated at 12.6 million annually once fully implemented.

It should be noted that the remaining 50% will be involved in a larger mission of improving data quality across the all types of data (not just accountability) that are more directly contributing to the mission of continuous education improvement.

REDUCED TECHNOLOGY COSTS FOR DISTRICTS
Technology costs will be reduced for districts as a result of several factors, including:• Reduced investment in data system costs by having a centralized capability that uses valuable Ed-Fi components obtained without license costs• Negotiated statewide costs for licensing to allow pricing as with largest districts – "cooperative purchasing"

• Reduced integration costs because vendors are supporting native Ed-Fi interfaces to the statewide system
• Reduced number of different systems reduces integration and maintenance costs
• Increased stability of systems over time, reducing transition costs
• Reduced costs to increased competitiveness because of reduced vendor lock-in
• Reduced district costs maintaining their own data warehouse
• Savings on procurement and contract costs

	Year 1 FY 2016 SY 2015-2016	Year 2 FY 2017 SY 2016-2017	Year 3 FY 2018 SY 2017-2018	Year 4 FY 2019 SY 2018-2019	Year 5 FY 2020 SY 2019-2020
Investment	$(14,149,128)	$(13,905,490)	$(13,905,492)		
Returns					
Reduced accountability costs		$1,524,169	$7,590,361	$12,600,000	$12,600,000
Reduced technology costs		$3,755,020	$11,265,060	$18,700,000	$18,700,000
Yearly net investment/return	$(14,149,128)	$(8,626,301)	$4,949,930	$31,300,000	$31,300,000
Cumulative investment/return	**$(14,149,128)**	**$(22,775,429)**	**$(17,825,499)**	**$13,474,501**	**$44,774,501**

5. Describe other solutions that were evaluated, including their strengths and weaknesses, and why they were rejected. Explain the implications of doing nothing and why this option is not acceptable.

A number of strategies were considered as possibilities to address the challenges facing Nebraska schools, but the opportunity to leverage the federal investment through SLDS, take advantage of an emerging royalty free open source technology that is supported through a network of a number of states, and meet the needs of school districts as reporting through surveys, focus groups, phone interviews and data the proposed approach provides the most systemic approach to the future.

Some states have chosen to purchase a single vendor solution, but the short and long term weaknesses of this approach include challenges with integration, risks associated with sustainability, and the long term financial commitment to a vendor to support the systems. This approach has not provided advantages to states and limits the options to embrace new and emerging technologies. Some states have completely relied on internal customization and development. The investment and management of staff to have the capacity for this approach limits the opportunities to embrace private company innovation and is extremely challenging with the currently available personnel services limitation. Ultimately, the approach to embrace the support of contractors, enhance the personnel to support the systems, and leveraging the capacity and market forces allows all of the options to benefit Nebraskans.

Doing nothing continues to undermine the opportunities available for Nebraska schools, reduces the effectiveness of the technology and systems investments made in Nebraska, and continues to impact the number of resources to target student achievement. The requirements of data collection along with the increasing uses of data require leadership from the state to support school districts, protect student privacy, and provide access to resources and tools to take advantage of the technologies available. Finally, doing nothing has the highest level of risk moving forward for Nebraska. This option is not acceptable for Nebraska and can be addressed through the efforts of this comprehensive and visionary series of work streams.

6. If the project is the result of a state or federal mandate, please specify the mandate being addressed.

There are multiple mandates at the state and federal level for school accountability, data reporting, and the use of what should be quality data. The Elementary and Secondary Education Act (ESEA) often referred to as No Child Left Behind, 30+ federal programs, state accountability, state aid calculations, and

a significant number of other data requirements are mandated. Most recently, LB438, requires using data to identify the lowest performing schools and provide support for those schools. Quality data and systems are a critical resource to achieve this requirement as well. The proposed approach creates an opportunity to effectively achieve these mandates and at the same time provide systems of support to benefit Nebraska schools.

Technical Impact (20 Points)

7. Describe how the project enhances, changes or replaces present technology systems, or implements a new technology system. Describe the technical elements of the project, including hardware, software, and communications requirements. Describe the strengths and weaknesses of the proposed solution.

Primarily the multiple projects create a systems approach to the planning and infrastructure for Nebraska schools and capitalize on the collaboration among NDE, ESUCC, and ESU systems to support Nebraska schools. The approach creates a unique opportunity to leverage federal, state, and local investment to achieve efficiencies. The process primarily creates an opportunity to change the way data is collected, used, stored, and ultimately accessed. In addition, the opportunity to focus on privacy, security, and transparency are critical elements considered through the work streams presented in the project

The technical aspects of the multiple stream project include a variety of technologies, but primarily are Microsoft based technologies including .Net, SQL, SSIS, SSRS, and the following expectations for staff and contractors to achieve:

USER INTERFACE DEVELOPER
This user interface will maintain the C# codebase for the dashboard. Troubleshoot display issues and errors in the dashboards; Helps analyze incorrect data displays to help identify the source of the defect (i.e. data load issue or UI display bug); create extensions to the dashboard: adjusting metric rendering, add elements to other pages through extensions, add new pages as they may be needed, add drilldown extensions. Maintain and troubleshoot REST API issues, add extensions to the REST API, and work with Business Analyst and districts to understand requirements for new features or enhancements.
Tools, Skills, Knowledge Areas
C#
ASP.NET MVC 3 with razor views
Visual Studio 2012 or Higher
Dependency Injection/Inversion of Control (Castle is used in the dashboards for IoC)
Git
jQuery
HTML
javascript
CSS
nunit
TDD/BDD
moq and/or rhino mocks
WebApi (for 2.0)

REST (for vNext)

DATABASE/ETL DEVELOPER

The person that will maintain the SSIS packages that transform data between data sources. Trouble shoot data calculation (transform) issues in the SSIS packages. Maintain any custom data mapping/exports. Troubleshoot SSIS package failures. Create new extension packages as needed for new data to be displayed in the dashboards. Analyze source data that will be loaded into ODS. Work with district Data Stewards during statewide rollout. Trouble shoot bulk load XML issues. maintain Accountability Data mart loads. Work with Data owner to maintain and develop extension ETL for ODS DW and Accountability Data mart.

Tools, Skills, Knowledge Areas
Microsoft SQL Server
MSSQL SSIS
Sql Data Tools/Visual Studio/ SSRS
XML
XML Editor like XML Spy
Mapping Tool like MapForce

Infrastructure

The person that will maintain the Continuous Integration and deployment environment. Maintain TeamCity builds. Troubleshoot TeamCity failures or errors. Maintain and troubleshoot API and dashboard deployments. Maintain different environments (e.g. Development, Test, Production). Work with SIS vendors; Integration of SIS vendors and data feeds for pilot testing, Integration of SIS vendor data feeds to the production environment during statewide rollout, Identify and resolve production issues with data feeds via the batch and/or API interfaces. Work with districts during statewide rollout; Integration of any batch data feeds at the district level (e.g. HR system loads). Address issues with pilot testing as it relates to data loads, builds and integration of new districts.

Tools, Skills, Knowledge Areas
Powershell
TeamCity
IIS
Continuous Integration

Data Steward/Data Owner/DBA or Data Architect

The Data Steward/ODS owner will be responsible for the long term maintenance of the Ed-Fi Operational Data Store (ODS). They will have responsibility for the ODS schema and accuracy of the data loaded and stored in the database. Additionally, they will have responsibility for understanding and supporting Nebraska specific ODS, Ed-FI LDW, and Accountability Data Mart extensions and extending the ODS, Ed-FI LDW, and Accountability Data Mart as required to support future enhancements. Maintain ODS, Ed-Fi LDW, and Accountability Data Mart schema. Change ODS, Ed-FI LDW, and Accountability Data Mart schema as needed for extensions. Identify and resolve issues with data feeds from the ODS to the Data Warehouse and Accountability Data Mart. Work with SIS Vendors; Assist with understanding the Ed-Fi xml standard, Assist with understanding the REST API interface to the ODS, Production issues with data feeds via the API interface. Work with Districts that utilize batch data load to the ODS; Statewide rollout integration and support, Coordinate with vendors and districts that are adding new batch data feeds to the ODS, Identify and resolve data quality/load issues. Work with district Data Stewards during statewide rollout; To identify and resolve data issues, Step up user claims mappings to district roles.

Tools, Skills, Knowledge Areas
Ed-Fi standard
DBA Skills
Nebraska Specific data requirements

Through the resources provided by the initial federal SLDS grant, training and capacity building of staff has started to increase the capabilities, skills, and knowledge in the areas required to support the efforts of long-term engagement and statewide rollout of the work associated with the strategies.

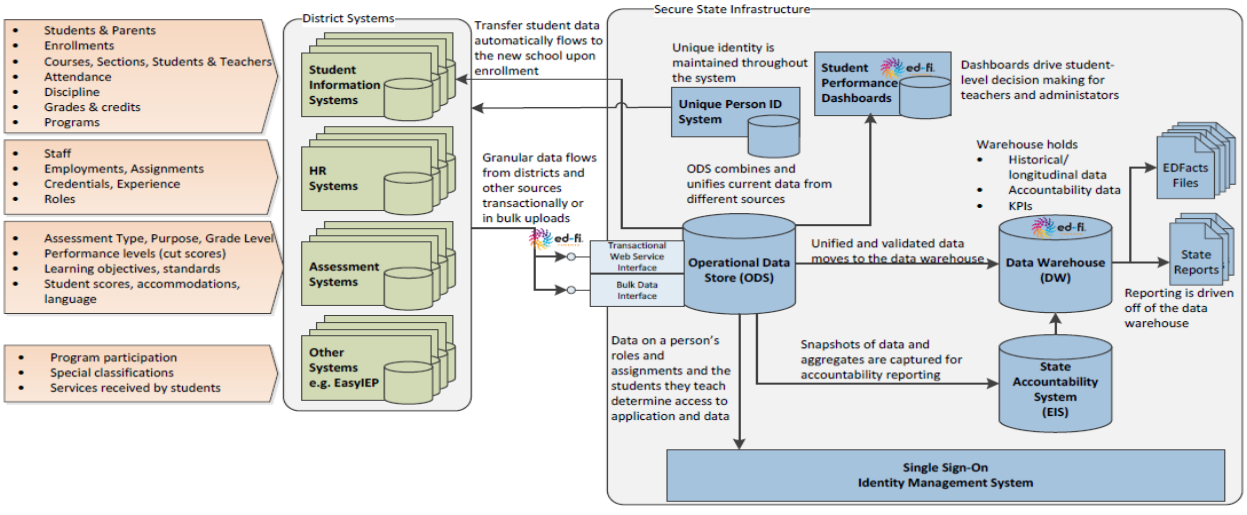
The implementation and coordination with the capacity provided through the ESUCC and the technical collaboration between NDE and ESUCC create an unprecedented opportunity to support the systemic integration and work of the broader vision for Nebraska. A pilot project utilizing JitBit support management is serving as a basis for testing statewide integration and support for new technology implementation.

The strengths of the proposal include engagement of an open source educational data standard framework and schema adopted by 24 states that creates a unique opportunity to leverage the investments and approaches of other states to enhance the resource in Nebraska. An significant example already realized during the pilot is the implementation of the early warning system, developed in Pennsylvania that identifies students likely on a path to dropping out of school. The “extension” was added to the core open source engagement and will be available for Nebraska schools that choose to implement as a resource.

The perceived weakness of the implementation is the increased human capacity required to sustain the efforts, but given the overarching advantages gained the small legitimate investment in staff capacity creates a unique opportunity for Nebraska heretofore has never existed.

The following is the high-level technical systems architecture approach to achieve a core of the systems:

Nebraska Building Capacity Approach



8. Address the following issues with respect to the proposed technology:
   - Describe the reliability, security and scalability (future needs for growth or adaptation) of the technology.

All efforts focus on reliability of the system to ensure security of the systems. The use of the federated single sign on solution, industry standard API technology, encryption strategies, role based authentication for access and integration into the applications provide to school districts all provide an opportunity to increase the level of security and ensure ultimately the scalability of the systems for the state.

   - Address conformity with applicable NITC technical standards and guidelines (available at http://nitc.ne.gov/standards/) and generally accepted industry standards.

All NITC technical standards and guidelines would continue to be critical resources for the planning and support of the system and integration. In addition, the ITIL standards, the Ed FI data standards, built from the Common Education Data Standards (CEDS) create a unique opportunity for synergy to ensure best practice is deployed through the process. In addition, the Project Management Book of Knowledge along with use of both the waterfall and agile techniques are supported through a current daily SCRUM approach to assist in the development work to achieve the baseline in preparation for the work ahead.

   - Address the compatibility with existing institutional and/or statewide infrastructure.

The primary goal of the project is to create a baseline for compatibility and reframe the statewide infrastructure for the future. The initial process for collecting student data established in 2006 has served a function to achieve the minimums required by districts, but overtime with added data requirements, increased expectations to use data to inform instruction, and technological advances it is now time for Nebraska to leap frog into a more efficient and effective system of supports for Nebraska education. The opportunity to learn from and build on the reputation of the national envy of Network Nebraska and create tools and infrastructure that support sound industry standard technology to create efficiency and effectiveness for Nebraska schools creates a significant window to save significant resources and provide a sound foundation for years to come in Nebraska education.

Preliminary Plan for Implementation (10 Points)

9. Describe the preliminary plans for implementing the project. Identify project sponsor(s) and examine stakeholder acceptance. Describe the project team, including their roles, responsibilities, and experience.

Leveraging the current federal SLDS grant to begin the process the project sponsors moving forward include the Nebraska Dept. of Education and the ESUCC. As part of the initial study and plan development the Nebraska Council of School Administrators, the Nebraska State Education Association, the Educational Service Unit Coordinating Council, the Nebraska Educational Technology Association, and most recently the Nebraska School Boards Association all have demonstrated commitment to communicate, support and align the priorities around building the capacity for quality secure data and ensure the unique opportunity of access to resources for teachers and students.

The project team and roles are outlined in the budget and integrate new positions for sustainability and development with existing staff and personnel to ensure continuity through the transition.

10. List the major milestones and/or deliverables and provide a timeline for completing each.

1, 3, AND 5 YEAR ROADMAP

The roadmap builds upon key pilot activities that underway this fiscal year (identified as Year 0, SY 15):

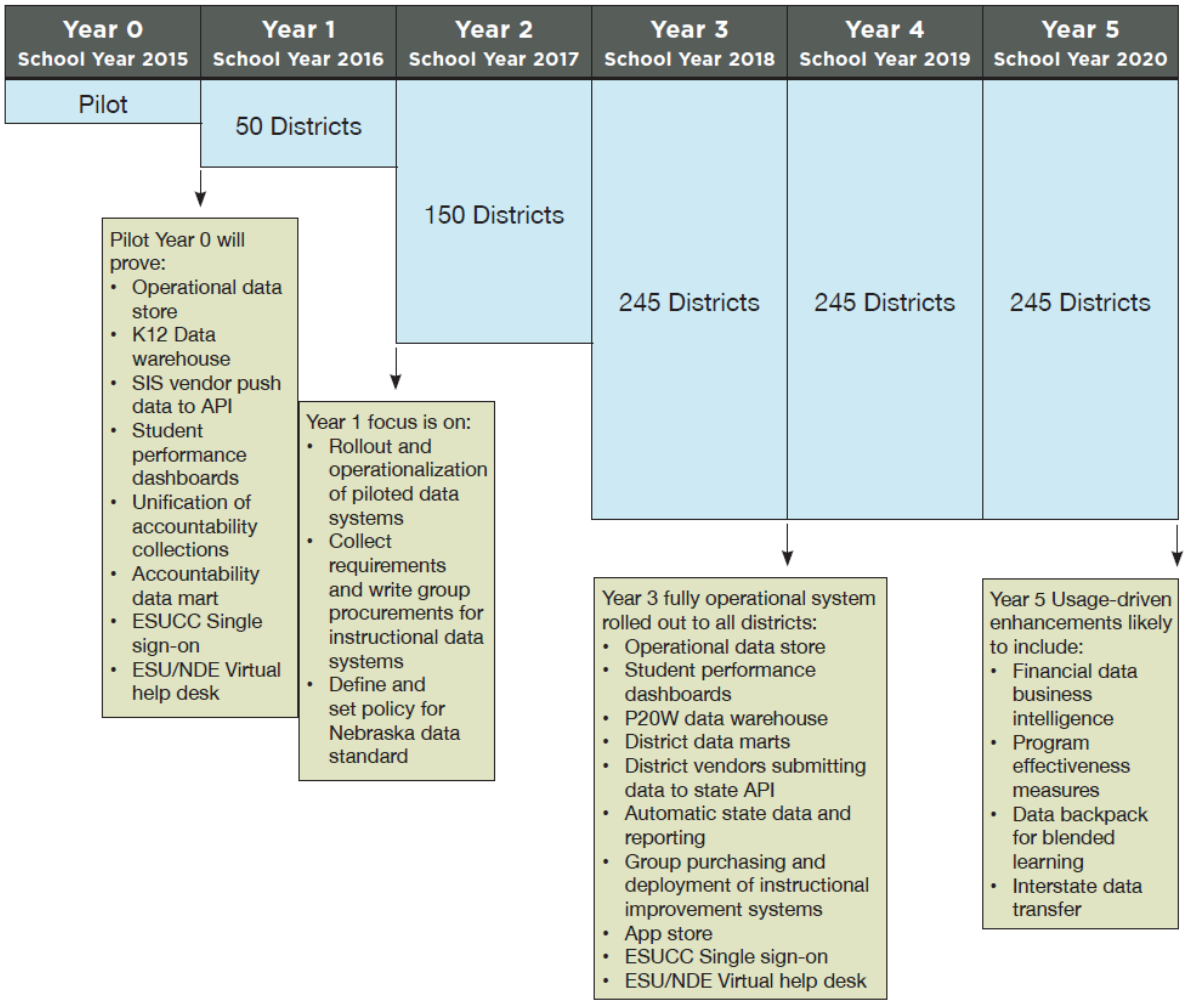
• Install, customize, integrate, pilot, and prove the Ed-Fi data system (www.ed-fi.org) consisting of an operational data store with transactional and batch data interfaces.

• Develop, pilot and prove the single-sign-on system under development by the ESUCC.

• Develop, pilot, and prove an accountability data mart, deriving accountability data from transactional data streams from the district student information systems. Accountability data will be submitted on dual paths from pilot districts, allowing the automatically derived data to be compared with their actual submissions.

• Install, customize, integrate, pilot, and prove the Ed-Fi longitudinal data warehouse and student performance dashboard.

• Use the dashboard pilots to also pilot the NDE-ESU virtual help desk to support the pilots.
These pilot activities will provide the base infrastructure to simultaneously expand and rollout the new Nebraska Education Data System over the next three years. The rollout plan targets the total districts being operational of approximately 50, 150, and ultimately 245 across years 1 through 3.
The major 1, 3, and 5-year milestones are summarized below.



In addition, the major activities associated with the work include the following by work stream and year:

Year 0 School Year 2015 Pilot	Year 1 School Year 2016 50 Districts	Year 2 School Year 2017 150 Districts	Year 3 School Year 2018 249 Districts	Year 4 School Year 2019 249 Districts	Year 5 School Year 2020 249 Districts
Nebraska					
Pilot data infrastructure	Integrate HR systems	Integrate Career Readiness	Intra-state data mobility	Interstate data mobility	
Pilot Ed-Fi dashboards	Expand and extend dashboards				
Pilot ESUCC Single sign-on	Integrate identity mgmt	Mature & scale data *infrastructure*		Integrate financial systems	
	Procure state-sponsored SIS'	Transition & support state-sponsored SIS'			
NDE Accountability Data System					
Unify NSSRS data collection	Unify CDC collection				
SIS vendors pilot data to API	Define NE Data Standard				
Pilot data mart	Build business rules	Develop state and Federal reporting		Add/modify state & Federal collections as required	
	Review & approval system	Dual submissions		Deprecate old systems	
NDE Education Intelligence System					
Install K12 data warehouse	Expand warehouse to P20W				
	Build district security	Pilot distict data marts		Develop program effectiveness analytics	
		Mature & scale data warehouse		Integrate financial data	Integrate financial analytics
Help Desk & Support					
Pilot virtual help desk	Expand capacity for ESUs + NDE Virtual Help Desk				
Nebraska Instructional Improvement System					
Define IIS requirements	Procure, deploy & train IIS tools			Student data backpack	
	Write group procurements	Develop, pilot & mature PD			
			App store		

11. Describe the training and staff development requirements.

Training and development is a critical need throughout the entire process and the collaborative relationship with the ESUCC, ESU's, Districts and the Department of Education provide a unique opportunity for coordination, support and efficiency around common standards and resources while at the same time provide opportunities for private companies to ensure innovation and advancement continues.

Continuing to build the capacity of internal staff along with contracting for specialized skills in the interim makes up the balanced approach to the work and serves as an opportunity to focus on sustainability and support for the systems in the future.

12. Describe the ongoing support requirements.

Upon the initial strategic investment and work, a core group of staff to support the continuous improvement and access to resources will be important. Through leveraging the resources saved, the potential for generating targeted service fees for software as a service (SaaS) resources through the app store and coordination within the educational system the sustainability requirements would be significantly

less than the costs associated with maintaining a status quo. In addition, through the leveraged approach, third party assets continue to ensure that innovation is available, yet coordinated to support districts.

Risk Assessment (10 Points)

13. Describe possible barriers and risks related to the project and the relative importance of each.

A detailed risk analysis was conducted with the current implementation of the ADVISER dashboard and related Ed Fi technologies. Many of these risks are germane to the proposed work.

Risks

The following risk areas are identified to focus the management team on proactively taking steps to mitigate those risks. For a detailed description of project risks with associated risk mitigation strategies and contingency plans, please reference the project risk log.

- The coordination between multiple groups involved in making the project a success: DLP, SIS Vendors, Network Nebraska, NDE staff, ESUs, ESUCC and districts.
- Dependencies upon external projects, specifically, SIS Vendor interfaces, ESUCC Identity Management project. Any delays in these projects or unexpected issues may impact the schedule.
- Statewide support for technical assistance on the dashboard and Identity Management System (SSO) is being developed and staffed.
- The Nebraska Dashboard project will be developed in parallel with the DLP Tennessee Infrastructure Beta (TIB) project. There is a possibility that some rework will be required as a result.
- Student Information System (SIS) Vendor development, integration and support
- The project is dependent upon vendor commitment to develop and support interfaces within a desired time period. If vendors are unable to meet the proposed schedule, NDE may choose to extend the integration and pilot periods to accommodate the vendor's schedule.
- A staged pilot may impact the planned training and knowledge transfer activities. Training will be most effective if it is completed just prior to the start of pilot activities. The current plan assumes all training is completed prior to the start of the first pilot. If additional training sessions to be added to the current plan, additional funding may be required.
- If SIS vendors have any delays in activities, the project schedule will be impacted. The mitigation strategy is to stage the pilot rollout based upon a revised vendor date.
- SIS vendors may have conflicting priorities which impacts their responsiveness to defects and defect corrections. This could result in delays in planned activities and possible delay to the start of pilot for those districts that use the associated SIS.
- If pilot districts have developed extensions for the Student Information Systems (SIS), there is a risk that these SIS extensions will not be correctly identified and will be omitted from the initial vendor interfaces and Dashboard implementation.
- The project is dependent upon vendor commitment to develop and support interfaces within a desired time period. If vendors are unwilling or unable to meet the desired schedule, then adjustments to schedule, pilot start or pilot district participation may be required.
- If there are delays in SIS vendor development or integration, there could be an increase project costs due to extended resource involvement.

Nebraska ESUCC Identity Management Project

- The ESUCC Identity Management Project is being developed in parallel with the Nebraska Dashboard project. Any delays in the project may impact planned integration and pilot activities.
- The level of effort required for integration of the Identity Management and single sign on (SSO) is an estimate due to the number of pending design decisions and strategy for home realm.

Potential Rewards

- Access for Nebraska schools to an online resource that provides educators with real time data visualization to support continuous school improvement and support the instructional improvement process for Nebraska's students.
- Integration and implementation of a systemic database infrastructure supporting future expansion and efficiencies.
- The potential for an efficient methodology of collecting student and staff information freeing up resources to focus on improving the quality of data and the effective use of data for continuous school improvement.
- An identity management process that can be utilized in multiple ways in emerging and supporting digital resources for Nebraska's educators.
- Staff capacity created to support elements of sustainability.

14. Identify strategies that have been developed to minimize risks.

Multiple approaches to mitigate risk include some of the following:

- Establishing the Nebraska Education Data Standard and requirements for adoption and use in Nebraska is a critical path
- Maintaining strong governance and oversight for entire project.
- Transparency on progress and issues
- Effective use of Project Management Office
- Communication plan and Change Management implementation
- Effective hiring and procurement processes.

Financial Analysis and Budget (20 Points)

15. Financial Information

The “Financial” information tab in the Nebraska Budget Request and Reporting System (NBRRS) is used to enter the financial information for this project (NOTE: For each IT Project Proposal created in the NBRRS, the submitting agency must prepare an “IT Issue” in the NBRRS to request funding for the project.)

Attached is the budget request summary submitted in the Nebraska Budget Request and Reporting System. The budget requests include both resources for contractors as well as key personnel and positions to support the creation, coordination, collaboration and continuation of the systems approach among Nebraska school districts.

NDE Expansion
Budget Activities v2 E

Nebraska Department of Education Infrastructure Activities

				Biennium Budget Request			
				Year 0 FY 2015 SY 2014-2015	Year 1 FY 2016 SY 2015-2016	Year 2 FY 2017 SY 2016-2017	Year 3 FY 2018 SY 2017-2018
				9 Districts	50 Districts	150 Districts	245 Districts
1	**Nebraska Education Infrastructure**			*Activities and Objectives*			
			Pilot initial SIS vendor Ed-Fi interfaces	Identify and collectively procure state-sponsored SIS(s)			
	NDE will leverage the Ed-Fi infrastructure to connect source systems and drive down costs.		Pilot assessment vendor interfaces	Support SIS Vendor Ed-Fi Interfaces	$ 166,667	$ 166,667	$ 166,667
				Support assessment vendor Ed-Fi interfaces	166,667	166,667	166,667
				Other source system interfaces to Ed-Fi (HR,SRS, applications)	250,000	250,000	250,000
				Support transfer to state supported systems in years 2 and 3	166,667	166,667	166,667
				Develop identity management solution for statewide single sign-on	100,000	100,000	100,000
				ESUCC Infrastructure	500,000	500,000	500,000
				Infrastructure scaling and security audit activities	250,000	250,000	250,000
				Total Contractual Expenditures	1,600,000	1,600,000	1,600,000
				New Positions			
				Chief of Staff	60,523	60,523	60,523
				Chief Technology Officer	68,502	68,502	68,502
				Lead	60,523	60,523	60,523
				Senior	55,047	55,047	55,047
				Analyst	50,099	50,099	50,099
				Analyst	50,099	50,099	50,099
				Total Salary Expenditures	344,793	344,793	344,793
				Benefits Expenditures	165,264	165,264	165,264
				Operating Expenditures	23,805	23,805	23,805
				Travel Expenditures	10,395	10,395	10,395
				Equipment Expenditures	60,360	-	-
				Nebraska Education Infrastructure Total	**$ 2,204,617**	**$ 2,144,257**	**$ 2,144,257**
2	**NDE Data Collection System**			*Objectives*			
			Accountability Pilot - integrate CDC, Staff, NSSRS d	Statewide rollout with dual submissions (rollout plan based on SIS vendor)	$ 500,000	$ 500,000	$ 500,000
	NDE will reduce the burden of accountability data submissions on districts through automated process leveraging the Ed-Fi infrastructure.			Develop and validate state accountability reports	500,000	500,000	500,000
				Develop business rules and validation for automatic accountability submissions	250,000	250,000	250,000
				Develop and validate federal accountability report submissions	500,000	500,000	500,000
				Develop district review and approval infrastructure	250,000	250,000	250,000
				Total Contractual Expenditures	2,000,000	2,000,000	2,000,000
				New Positions			
				Director, Accountability Data Systems	68,502	68,502	68,502
				Program Specialist III	55,047	55,047	55,047
				Database Analyst Lead	60,523	60,523	60,523
				Database Analyst Senior	55,047	55,047	55,047
				Database Analyst	50,099	50,099	50,099
				Database Analyst	50,099	50,099	50,099
				Total Salary Expenditures	339,317	339,317	339,317
				Benefits Expenditures	164,380	164,380	164,380
				Operating Expenditures	23,805	23,805	23,805
				Travel Expenditures	14,070	14,070	14,070
				Equipment Expenditures	37,680	-	-
				NDE Accountability Data System Total	**$ 2,579,252**	**$ 2,541,572**	**$ 2,541,572**
3	**NDE Education Intelligence System**			*Objectives*			
			Pilot SLDS Student-Level Dashboard	Dashboard statewide rollout	$ 200,000	$ 200,000	$ 200,000
				Dashboard updates and extensions	500,000	500,000	500,000
				District data warehouses and reporting layer	333,333	333,333	333,333
				District data warehouse security layer (with and without de-identification)	250,000	250,000	250,000
				NDE data warehouse cubes and BI layer	166,667	166,667	166,667
				Total Contractual Expenditures	1,450,000	1,450,000	1,450,000
				New Positions			
	NDE will create education intelligence - access to actionable insight - through a warehouse, business intelligence tools, and increased internal capacity.			Chief Privacy Officer	79,873	79,873	79,873
				Director, Data Research and Evaluation	68,502	68,502	68,502
				Database Analyst Lead	60,523	60,523	60,523
				Database Analyst Senior	55,047	55,047	55,047
				Database Analyst	50,099	50,099	50,099
				Database Analyst	50,099	50,099	50,099
				Total Salary Expenditures	364,143	364,143	364,143
				Benefits Expenditures	168,387	168,387	168,387
				Operating Expenditures	24,510	35,510	35,510
				Travel Expenditures	17,680	17,680	17,680
				Equipment Expenditures	60,360	-	-
				NDE Education Intelligence System Total	**$ 2,085,080**	**$ 2,035,720**	**$ 2,035,720**
4	**Help Desk & Support**						
			Virtual Help Desk Pilot - Dashboards	Expand help-desk support to include Year 1,2 & 3 systems	$ 50,000	$ 50,000	$ 50,000
	NDE, along with the ESUCC and ESU's, will provide technical support for Nebraska education data systems through a virtual help desk and coordinated knowledge transfer.		PD Curriculum	Develop professional development curriculum on Year 1,2 & 3 systems	50,000	50,000	50,000
				Integrate statewide ticketing system for "virtual help desk"	166,667	166,667	166,667
				Level 4 Support and Contracts	500,000	500,000	500,000
				Total Contractual Expenditures	766,667	766,667	766,667
				New Positions			
				Director, Project Management Office	68,502	68,502	68,502
				IT Help Desk Specialist Senior	50,099	50,099	50,099
				IT Help Desk Specialist	41,706	41,706	41,706
				IT Help Desk Specialist	41,706	41,706	41,706
				Project Manager	50,099	50,099	50,099
				Project Manager	50,099	50,099	50,099
				Total Salary Expenditures	302,211	302,211	302,211
				Benefits Expenditures	158,393	158,394	158,395
				Operating Expenditures	23,805	26,555	26,555
				Travel Expenditures	10,395	10,396	10,397
				Equipment Expenditures	43,350	-	-
				Help Desk & Support Total	**$ 1,304,821**	**$ 1,264,223**	**$ 1,264,225**
				Total NDE DRE Capacity Building	**$ 8,173,770**	**$ 7,985,772**	**$ 7,985,774**
IIS	**NE Instructional Improvement System**			**Objectives**			
			Identify key systems:	Identify and collectively procure state-sponsored systems			
	NDE will build the capacity of Nebraska educators to continuously improve the quality of instruction for students through integrated, efficient systems. This will serve as an application store.		- learning management	Support vendors in integrating with SSO and state data system	$ 166,667	$ 166,667	$ 166,667
			- blended learning	Provide PD for districts	83,333	83,333	83,333
			- teacher/principal evaluation	System licenses paid by state	5,000,000	5,000,000	5,000,000
			- school climate	App Store			
			- career readiness	Survey Resources and Tools			
				Total Contractual Expenditures	5,250,000	5,250,000	5,250,000
				New Positions			
				Director, Instructional Improvement System	68,502	68,502	68,502
				Education Specialist IV	68,502	68,502	68,502
				Program Specialist III	60,523	60,523	60,523
				Applications Developer Lead	60,523	60,523	60,523
				Applications Developer Senior	55,047	55,047	55,047
				Applications Developer	50,099	50,099	50,099
				Applications Developer	50,099	50,099	50,099
				Total Salary Expenditures	413,295	413,295	413,295
				Benefits Expenditures	194,588	194,588	194,588
				Operating Expenditures	28,360	39,360	39,360
				Travel Expenditures	22,475	22,475	22,475
				Equipment Expenditures	66,640	-	-
				NE Instructional Improvement System Total	**$ 5,975,358**	**$ 5,919,718**	**$ 5,919,718**
				Total NDE DRE Budget Issue Requests	**$ 14,149,128**	**$ 13,905,490**	**$ 13,905,492**

Nebraska Information Technology Commission

Project Proposal Form

Funding Requests
for Information Technology Projects

2015-2017 Biennial Budget

IMPORTANT NOTE: Project proposals should only be submitted by entering the information into the Nebraska Budget Request and Reporting System (NBRRS). The information requested in this Microsoft Word version of the form should be entered in the NBRRS in the "IT Project Proposal" section. The tabs in the "IT Project Proposal" section coincide with sections contained in this Microsoft Word version of the form. Information may be cut-and-pasted from this form or directly entered into the NBRRS. ALSO NOTE that for each IT Project Proposal created in the NBRRS, the submitting agency must prepare an "IT Issue" in the NBRRS to request funding for the project.

Project Title	**Instructional Improvement Systems**
Agency/Entity	**Nebraska Dept. of Education**

Notes about this form:

1. **USE.** The Nebraska Information Technology Commission ("NITC") is required by statute to "make recommendations on technology investments to the Governor and the Legislature, including a prioritized list of projects, reviewed by the technical panel..." Neb. Rev. Stat. § 86-516(8). "Governmental entities, state agencies, and noneducation political subdivisions shall submit all projects which use any combination of general funds, federal funds, or cash funds for information technology purposes to the process established by sections 86-512 to 86-524. The commission may adopt policies that establish the format and minimum requirements for project submissions." Neb. Rev. Stat. § 86-516(5). In order to perform this review, the NITC and DAS Budget Division require agencies/entities to complete this form when requesting funding for technology projects.
2. **WHICH TECHNOLOGY BUDGET REQUESTS REQUIRE A PROJECT PROPOSAL FORM?** See NITC 1-202 available at http://nitc.ne.gov/standards/. Attachment A to that document establishes the minimum requirements for project submission.
3. **COMPLETING THE FORM IN THE NEBRASKA BUDGET REQUEST AND REPORTING SYSTEM (NBRRS).** Project proposals should only be submitted by entering the information into the NBRRS. The information requested in this Microsoft Word version of the form should be entered in the NBRRS in the "IT Project Proposal" section. The tabs in the "IT Project Proposal" section coincide with sections contained in this Microsoft Word version of the form. Information may be cut-and-pasted from this form or directly entered into the NBRRS. ALSO NOTE that for each "IT Project Proposal" created in the NBRRS, the submitting agency must prepare an "IT Issue" in the NBRRS to request funding for the project.
4. **QUESTIONS.** Contact the Office of the CIO/NITC at (402) 471-7984 or ocio.nitc@nebraska.gov

General Information

Project Title	Instructional Improvement Systems
Agency (or entity)	Nebraska Dept. of Education

Contact Information for this Project:

Name	Dean Folkers
Address	301 Centennial Mall South
City, State, Zip	Lincoln, NE 68509
Telephone	402-471-4740
E-mail Address	Dean.folkers@nebraska.gov

Executive Summary

The recent Nebraska Education Data Systems study, in response to Legislative Resolution 264, found that Nebraska spends an estimated $100 million annually for technology systems, software systems, and accountability data submissions by the public school districts and the Nebraska Department of Education (NDE). The systems and applications are largely focused on satisfying Federal and State accountability reporting requirements and do not directly contribute to supporting teaching and learning. The districts submit annual collections of data to support accountability to the state using a combination of automated and manual methods. An estimated 655,200 hours are spent by districts preparing the required collections for each year's accountability data submission.

Each district has selected its own set of administrative, teaching and learning, and back office applications and there is a large disparity in the number of applications available in small districts versus larger districts due to budget, staff, and capacity. Outside of Nebraska's largest districts, the digital tools are poorly integrated, there is little support for data-driven decision-making, and modern tools are not available to support instructional improvement necessary for the state's education initiatives of blended learning, teacher and principal evaluation, career readiness, and continuous school improvement.

Nebraska's network of Educational Service Units (ESUs), the ESU Coordinating Council (ESUCC), and Network Nebraska are all contributing to improving the capabilities and the efficiencies of the data systems for the districts. However, the coordination, support, and access for systems can be dramatically improved and serves as the basis for this multi-faceted approach to develop a statewide data system that builds long-term capacity, efficacy, and efficiency for the system of education. The study established 10 recommendations that included five work streams; leverage work conducted using the federal $4.3 million SLDS grant scheduled to end June 2015.

The proposed implementation roadmap for the Nebraska Education Data System estimates a three-year investment of $41,960,110, roughly evenly split across the three years. The rollout plan targets a phase in process over three years that could include 50 districts the first year, 150 the second year, and 245 during the third year resulting in cost savings and efficiencies that will also provide a financial return from substantially-reduced accountability costs and from reduced technology costs to districts. The projected cumulative net return for the investment over five years is $44.8 million. However, the primary benefits from the recommended investments will come from a greatly improved instructional system that improves student performance leading to greater student success.

Goals, Objectives, and Projected Outcomes (15 Points)

1. Describe the project, including:
   - Specific goals and objectives;

The following goals are established based on the recommendations from the Education Data System study. Using the strategies and infrastructure of the building capacity project the opportunity to build and use the foundation to provide access and support for school districts through and Instructional Improvement System.

For purposes of context the goals associated the Education Data Systems Building Capacity project are provided as well.

Goal 1: Make security, privacy, transparency, and the proper use of data the core of the Nebraska Education Data System implementation.

Districts should continue to "own" their data within the statewide system. The ESU hosting must support enterprise-grade security with yearly independent security audits. The following tenets are recommended to protect privacy while ensuring proper use of student data:

1. Ensure that all agencies, organizations, contractors, and vendors that have access to student education records provide the same strength of protection, control, and transparency as codified in appropriate policies, contracts, and data sharing agreements.
2. Ensure that all persons that have access to student education records have training and certification (micro credentials) on the proper use and protection of education records.
3. Limit access to individual student education records to the minimal set of personnel essential for legitimate education purposes, for the shortest period of time required for that purpose, and to the smallest set of data required for that purpose.
4. To the maximum extent possible, use aggregate data and de-identified data in place of individual student education records.
5. Provide parents transparency into the sources and uses of student data.
6. Provide parents control of the child's education record to the maximum extent that is possible while preserving legitimate educational use of that data.

Goal 2: Unify the data collection requirements into the Nebraska Education Data Standards (NEDS) to minimize the reporting burden on districts.

Replace the current system of accountability data submissions by instead deriving accountability data from an extended set of data sent securely by district systems into the Nebraska Education Data System (NEDS). The system would move the computations and business rule checks to the state level for better efficiency and consistency while also providing a transparent facility for district review and approval.

Goal 3: Require application vendors and other sources to provide data in a standard form specified by NDE directly into the NEDS. Adopt a Nebraska Education Data Standard in collaboration with the NITC.

Native vendor interfaces are required for sustainability. Ed-Fi defined CEDS-compliant data standard adopted in 24 states that can be extended for Nebraska-specific requirements. Ed-Fi adoption preserves district choice while maintaining data standardization at the state level. A governance process will be required to maintain the Nebraska-extended version of Ed-Fi year-to-year.

Note that to ensure continued vendor participation, the data interface requirement needs to be in policy or legislation to ensure vendor compliance.

Goal 4: Leverage and strengthen Nebraska's ESU network, the ESUCC, and Network Nebraska to host, maintain, and sustain the Nebraska Education Data System, to support a statewide virtual help desk, and to train the educators in it is use.

Provide an enterprise-grade, efficient and economical technology platform through which applications and services are delivered to improve school performance and learner outcomes. The statewide system of support would leverage the resources at NDE, ESUCC, ESUs and districts to provide help desk support to districts and professional development coordination.

Goal 5: Leverage the state-level market to influence vendors, negotiate lower prices through competition, provide consistent functions and pricing across large and small districts, and expand the number and quality of instructional applications.

Facilitate "economies of scale" and cooperative purchasing at the state and/or ESU level and centralized services that lower costs without sacrificing the quality of products and services. Use this leverage to greatly expand the number and quality of instructional improvement applications.

The strategy is to create essentially an "application store" for school districts to choose from that leverages the collective bargaining advantage of 245 schools districts, 300,000 students, ESU resources and the Nebraska Department of Education.

Goal 6: Invest in providing education intelligence - access to actionable insight - through a warehouse, business intelligence tools, and increased internal capacity for districts, policy makers, and researchers.

Leverage the Ed-Fi K-12 statewide longitudinal date warehouse for use by districts, administrators, and researchers to support analysis of student performance, college and career readiness and success, instructional improvement initiatives, teacher evaluations, student intervention and professional development effectiveness. Integrate finance data, early childhood, postsecondary and workforce data.

Goal 7: Invest in an integrated data system that spans the districts, the ESUs, and NDE to support continuous education improvement.

The resulting Nebraska Education Data System (NEDS) should build upon the ongoing SLDS project to leverage the Ed-Fi data standards and technologies for the data system and dashboards. The system should adopt and build upon the ESUCC project for Single Sign-On (SSO). While the system will initially focus on serving the districts, it should ultimately be expanded to reach students and parents, community service organizations, and researchers.

Goal 8: Integrate staff data from district and state data sources, link teachers to student performance and success, and add additional data to better support teacher evaluation and professional development.

This will require integration of both the HR and SIS at the district level with the Teacher Certification and NPERS at the state level. Teachers will be linked to students to assess their contribution to student performance and growth. Additional data will be integrated for teacher evaluations and observations, survey data, and professional development.

Goal 9: Invest in the licensing, integration and training of an Instructional Improvement System that is cost-effective for districts of all sizes.

The system will include the critical digital assets and tools to support areas like learning management systems, content management systems, blended and online learning, teacher/principal evaluation system, school improvement and climate tools, career readiness and discovery, local assessment systems, and other tools to enhance the educational opportunities and experiences.

Goal 10: Develop the staff and processes necessary to sustain the Nebraska Education Data System.

Additional leadership positions are recommended and include a K-12 Chief Information Officer and Chief Privacy Officer at NDE. The recommended initiative will expand an emerging project management office. Additional data governance processes will be required. Additional technical staff will be required at NDE and in the ESUs to meet the statewide help desk and support requirements.

Overall, the goals have been organized into five work streams: The fifth work stream, instructional improvement system (IIS), is the primary focus of this project, but the others are provided for context and understanding the integration to support the IIS.

1. Nebraska Education Infrastructure / Leveraged Capacity –

Leverage an open-source education data standard along with accompanying technical assets – student-level dashboards for teachers and secure data warehouses for reporting. Developing the Nebraska Education Data Standard – will mean a set of data standards for interoperability of systems. This work will also include the infrastructure to support a major data system, including a single sign on offering from the ESUCC. leverage the Ed-Fi infrastructure to connect source systems and drive down costs.

2. Automated Collections –

Reduce reporting burden by providing efficiency and automation for data submissions through the leveraged secure data infrastructure and support. The implementation of the transactional API among the applications significantly reduces the reporting burden.

3. NDE Education Intelligence System / Actionable Insight --

Targeted resources, once expended on data submission, can be directed to effectively using Nebraska's data system and ensuring privacy and security of the data. The educational insight will include the ADVISER Dashboard, data warehouse, and other longitudinal analysis that would inform both policy and practice. to provide access to actionable insight – through a warehouse, business intelligence tools, and increased internal capacity.

4. Help Desk & Support –

Collaborate to include Training and Help Desk support around the systems—statewide. The cooperative support would provide opportunities for NDE, ESUCC and others to coordinate assistance using a tiered ticketing system, knowledge transfer, and professional development for data use.

5. Nebraska Instructional Improvement System –

Leverage the interoperability of the data standard and the state "buying power" to support an Instructional Improvement System. The creation of an "app store" would provide low cost or free options for school districts to choose applications that support digital system access and data integration—for all districts in Nebraska.

- **Expected beneficiaries of the project; and**

School Districts and local communities, Educational Service Units, Multiple Government Agencies, postsecondary education, and ultimately students are the primary beneficiaries of the projects. Reducing the reporting burden of districts, provided secure and near real time access to insightful metrics and information assist school districts required to submit and use data daily. The support systems and coordination of the ESUCC and NDE provide wrap around efforts to efficiently provide resources to schools in Nebraska. Increasing the data quality and timeliness of the data collection provides opportunities for research and evaluation into policy and supports innovative understanding of practice. Alignment to postsecondary education, P-20, workforce, and other critical systems in Nebraska provide unique opportunities to effectively provide insight that support opportunities for secure management of the information ensuring the protection of student privacy while empowering access for all Nebraska students to thrive.

In addition, the primary focus of the IIS is to provide school districts access to integrated digital systems at a free or low cost. The "application store" that supports the IIS provides districts choice of a suite of applications that are aligned and connected to the priorities of Nebraska Education Data Standards, API automation, educational insight and security, and the help desk and training systems as part of the core expectations associated with the technical approach from the IIS.

- **Expected outcomes.**

An integrated, sustainable, and comprehensive systems approach to support local control while leveraging the capacity of continuity, efficiency, and equitable access to technological tools of efficiency is primary overarching expected outcomes.

In addition, the reduction of reporting burden using the current methods of collection, while increasing the quality and timeliness of the data increases the opportunities to effectively use information for all schools in Nebraska.

Lower costs, leveraging the capacity of the state for systems is an outcome realized for all districts.

Integrated data systems that support a Nebraska Education Data Standard provide a clear expectation for districts and third party vendors what the expectations are in Nebraska support a base of continuity and allow for innovation and cost savings.

Increased focus on student data privacy, security and transparency.

2. Describe the measurement and assessment methods that will verify that the project outcomes have been achieved.

The multiple aspects of the systems include a number of measurements to ensure completion and ongoing continuous improvement and evaluation. The primary measures will be a reduced burden of reporting data for the use at the lowest level and an increase in the use of the data to inform policy and practice.

In addition, the following measurements are examples of metrics established to measure and assess the project outcomes.

1. Suite of applications available to school districts to select and in cases provide a fee for services.
2. Vendor engagement and management systems developed and deployed.
3. Implementation and integration of a district user services governance board.

Additional multiple measures and metrics that included the comprehensive integration and of the entire project will a mission critical focus of the project work and connected to the performance management system of staff associated with the projects.

3. Describe the project's relationship to your agency comprehensive information technology plan.

The project is at the core of the information agencies technology plan and represents a critical path moving forward to support effective schools, changes in Nebraska accountability, and efficiencies to ensure effective use of financial and human resources while at the same time ensuring equitable opportunities for all school districts in Nebraska.

Project Justification / Business Case (25 Points)

4. Provide the project justification in terms of tangible benefits (i.e. economic return on investment) and/or intangible benefits (e.g. additional services for customers).

Overall, the instructional improvement system (IIS) and the estimates associated with the work for economic impact can be extrapolated

ESTIMATED FINANCIAL RETURNS
The primary benefits from the recommended investments will come from a greatly improved instructional system that improves student performance leading to greater student success. However the proposed approach also results in cost savings and efficiencies that will provide a financial return from substantially-reduced accountability costs and from reduced technology costs to districts.

REDUCED TECHNOLOGY COSTS FOR DISTRICTS
Technology costs will be reduced for districts as a result of several factors, including:• Reduced investment in data system costs by having a centralized capability that uses valuable Ed-Fi components obtained without license costs• Negotiated statewide costs for licensing to allow pricing as with largest districts – "cooperative purchasing"

• Reduced integration costs because vendors are supporting native Ed-Fi interfaces to the statewide system
• Reduced number of different systems reduces integration and maintenance costs
• Increased stability of systems over time, reducing transition costs
• Reduced costs to increased competitiveness because of reduced vendor lock-in
• Reduced district costs maintaining their own data warehouse
• Savings on procurement and contract costs

REDUCED ACCOUNTABILITY COSTS
Accountability costs will be reduced by unifying and moving accountability computations to state from a single fine-grained data collection. An estimated 455 FTEs are involved in the current data collection process at districts, representing an annual cost of $22.75 million. NDE spends an additional $2.5M per year on licensing, IT personnel and help desk supporting the accountability submissions. The recommended NEDS, when fully implemented, can re-direct at an estimated 50% of the district FTE time

related to accountability submissions to focus on other initiatives that impact can more directly improve student performance and success. This value is estimated at $12.6 million annually once fully implemented.

It should be noted that the remaining 50% will be involved in a larger mission of improving data quality across the all types of data (not just accountability) that are more directly contributing to the mission of continuous education improvement.

	Year 1 FY 2016 SY 2015-2016	Year 2 FY 2017 SY 2016-2017	Year 3 FY 2018 SY 2017-2018	Year 4 FY 2019 SY 2018-2019	Year 5 FY 2020 SY 2019-2020
Investment	$(14,149,128)	$(13,905,490)	$(13,905,492)		
Returns					
Reduced accountability costs		$1,524,169	$7,590,361	$12,600,000	$12,600,000
Reduced technology costs		$3,755,020	$11,265,060	$18,700,000	$18,700,000
Yearly net investment/return	$(14,149,128)	$(8,626,301)	$4,949,930	$31,300,000	$31,300,000
Cumulative investment/return	**$(14,149,128)**	**$(22,775,429)**	**$(17,825,499)**	**$13,474,501**	**$44,774,501**

5. Describe other solutions that were evaluated, including their strengths and weaknesses, and why they were rejected. Explain the implications of doing nothing and why this option is not acceptable.

A number of strategies were considered as possibilities to address the challenges facing Nebraska schools, but the opportunity to leverage the federal investment through SLDS, take advantage of an emerging royalty free open source technology that is supported through a network of a number of states, and meet the needs of school districts as reporting through surveys, focus groups, phone interviews and data the proposed approach provides the most systemic approach to the future.

Some states have chosen to purchase a single vendor solution, but the short and long term weaknesses of this approach include challenges with integration, risks associated with sustainability, and the long term financial commitment to a vendor to support the systems. This approach has not provided advantages to states and limits the options to embrace new and emerging technologies. Some states have completely relied on internal customization and development. The investment and management of staff to have the capacity for this approach limits the opportunities to embrace private company innovation and is extremely challenging with the currently available personnel services limitation. Ultimately, the approach to embrace the support of contractors, enhance the personnel to support the systems, and leveraging the capacity and market forces allows all of the options to benefit Nebraskans.

Doing nothing continues to undermine the opportunities available for Nebraska schools, reduces the effectiveness of the technology and systems investments made in Nebraska, and continues to impact the number of resources to target student achievement. The requirements of data collection along with the increasing uses of data require leadership from the state to support school districts, protect student privacy, and provide access to resources and tools to take advantage of the technologies available. Finally, doing nothing has the highest level of risk moving forward for Nebraska. This option is not

acceptable for Nebraska and can be addressed through the efforts of this comprehensive and visionary series of work streams.

The opportunity to create an instructional improvement from a systems level perspective and coordinate access to tools and resources provides a unique advantage for districts to meet their unique and individual needs while at the same time ensuring equity of access of the tools to districts. There is no single vendor solution for an IIS and the opportunity for Nebraska to work with educators, leverage ESUCC, and the ESU's to connect a comprehensive and cost effective approach for Nebraska.

6. If the project is the result of a state or federal mandate, please specify the mandate being addressed.

There are multiple mandates at the state and federal level for school accountability, data reporting, and the use of what should be quality data. The Elementary and Secondary Education Act (ESEA) often referred to as No Child Left Behind, 30+ federal programs, state accountability, state aid calculations, and a significant number of other data requirements are mandated. Most recently, LB438, requires using data to identify the lowest performing schools and provide support for those schools. Quality data and systems are a critical resource to achieve this requirement as well. The proposed approach creates an opportunity to effectively achieve these mandates and at the same time provide systems of support to benefit Nebraska schools.

While not a specific mandate the instructional improvement system incorporates the tools and resources that support the mandates, including the teacher principal evaluation work and the professional development associated with educator effectiveness.

Technical Impact (20 Points)

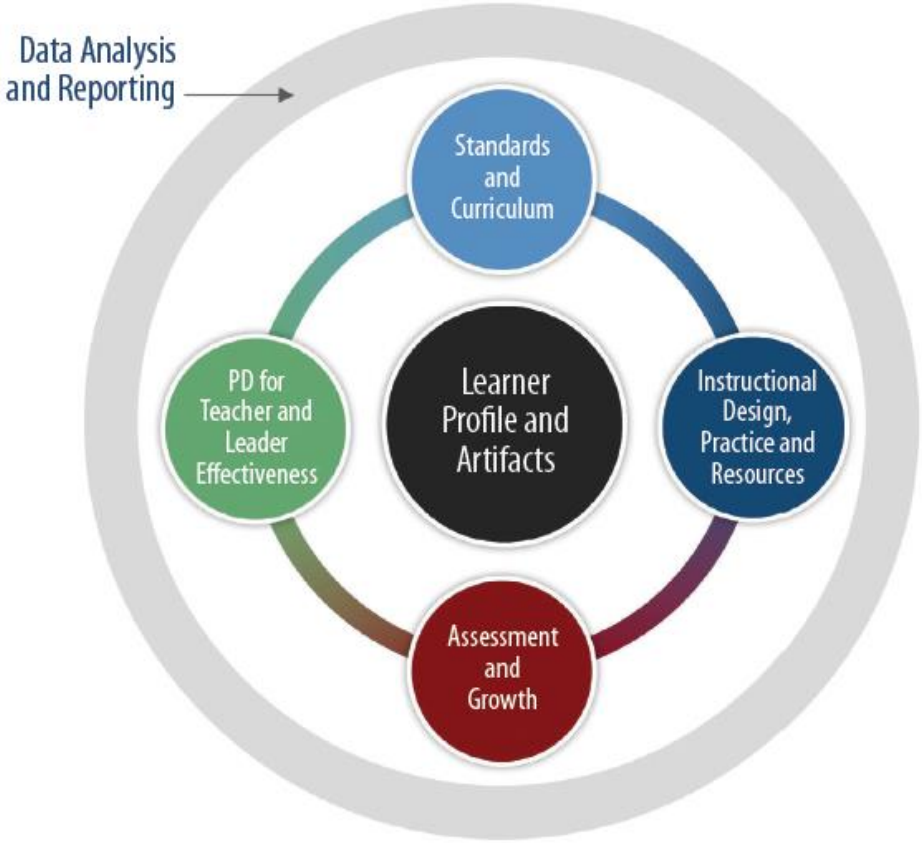
7. Describe how the project enhances, changes or replaces present technology systems, or implements a new technology system. Describe the technical elements of the project, including hardware, software, and communications requirements. Describe the strengths and weaknesses of the proposed solution.

Primarily the multiple projects create a systems approach to the planning and infrastructure for Nebraska schools and capitalize on the collaboration among NDE, ESUCC, and ESU systems to support Nebraska schools. The approach creates a unique opportunity to leverage federal, state, and local investment to achieve efficiencies. The process primarily creates an opportunity to change the way data is collected, used, stored, and ultimately accessed. In addition, the opportunity to focus on privacy, security, and transparency are critical elements considered through the work streams presented in the project

The implementation and coordination with the capacity provided through the ESUCC and the technical collaboration between NDE and ESUCC create an unprecedented opportunity to support the systemic integration and work of the broader vision for Nebraska. A pilot project utilizing JitBit support management is serving as a basis for testing statewide integration and support for new technology implementation.

The perceived weakness of the implementation is the increased human capacity required to sustain the efforts, but given the overarching advantages gained through small legitimate investment in staff capacity creates a unique opportunity for Nebraska heretofore that has never existed.

The following is the high-level architecture approach to achieve a core of the instructional improvement systems



8. Address the following issues with respect to the proposed technology:
   - Describe the reliability, security and scalability (future needs for growth or adaptation) of the technology.

All efforts focus on reliability of the system to ensure security of the systems. The use of the federated single sign on solution, industry standard API technology, encryption strategies, role based authentication for access and integration into the applications provide to school districts all provide an opportunity to increase the level of security and ensure ultimately the scalability of the systems for the state.

   - Address conformity with applicable NITC technical standards and guidelines (available at http://nitc.ne.gov/standards/) and generally accepted industry standards.

All NITC technical standards and guidelines would continue to be critical resources for the planning and support of the system and integration. In addition, the ITIL standards, the Ed FI data standards, built from the Common Education Data Standards (CEDS) create a unique opportunity for synergy to ensure best practice is deployed through the process. In addition, the Project Management Book of Knowledge along with use of both the waterfall and agile techniques are supported through a current daily SCRUM approach to assist in the development work to achieve the baseline in preparation for the work ahead.

   - Address the compatibility with existing institutional and/or statewide infrastructure.

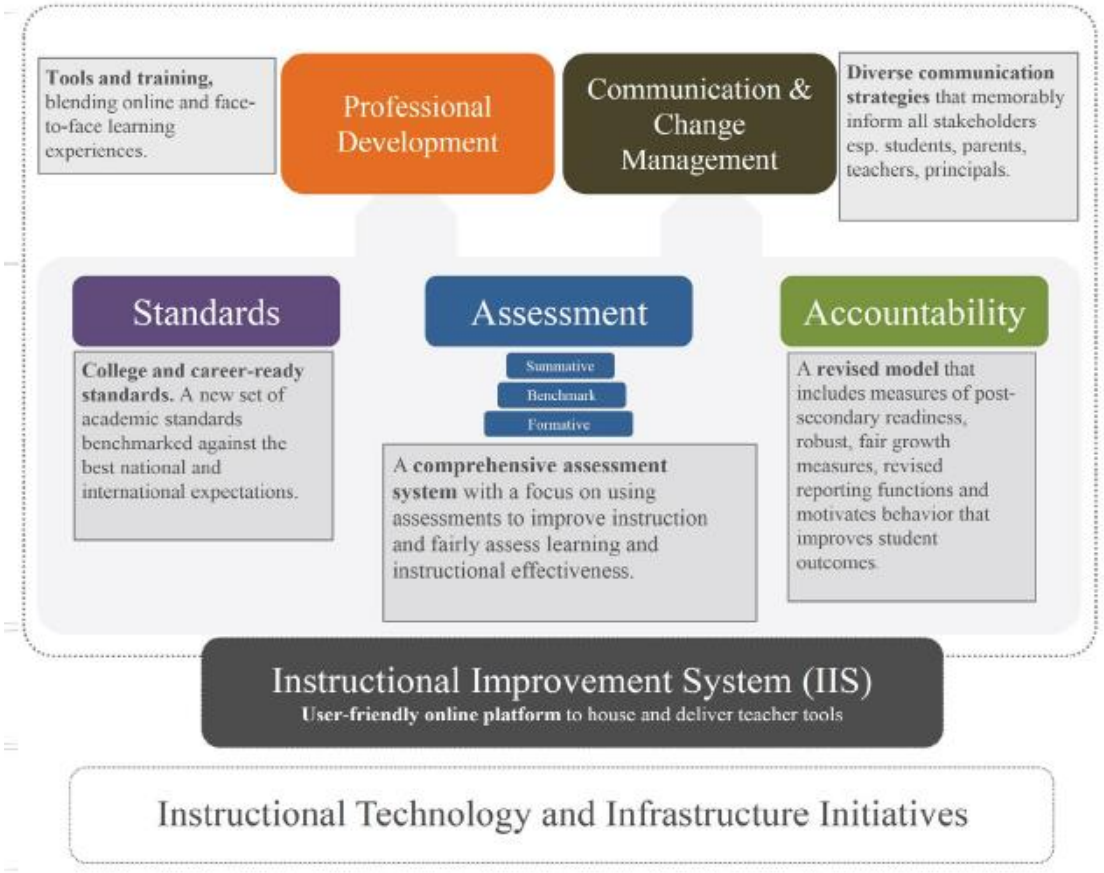
The primary goal of the project is to create a baseline for compatibility and reframe the statewide infrastructure for the future. The initial process for collecting student data established in 2006 has served a function to achieve the minimums required by districts, but overtime with added data requirements, increased expectations to use data to inform instruction, and technological advances it is now time for Nebraska to leap frog into a more efficient and effective system of supports for Nebraska education. The opportunity to learn from, build on the reputation of the national envy of Network Nebraska, and create tools and infrastructure that support sound industry standard technology to create efficiency and effectiveness for Nebraska schools creates a significant window to save significant resources and provide a sound foundation for years to come in Nebraska education.

Preliminary Plan for Implementation (10 Points)

9. Describe the preliminary plans for implementing the project. Identify project sponsor(s) and examine stakeholder acceptance. Describe the project team, including their roles, responsibilities, and experience.

Leveraging the current federal SLDS grant to begin the process the project sponsors moving forward include the Nebraska Dept. of Education and the ESUCC. As part of the initial study and plan development the Nebraska Council of School Administrators, the Nebraska State Education Association, the Educational Service Unit Coordinating Council, the Nebraska Educational Technology Association, and most recently the Nebraska School Boards Association all have demonstrated commitment to communicate, support and align the priorities around building the capacity for quality secure data and ensure the unique opportunity of access to resources for teachers and students.

The project map would look like the following from the North Carolina Department of Public Instruction:



The project team and roles are outlined in the budget and integrate new positions for sustainability and development with existing staff and personnel to ensure continuity through the transition.

10. List the major milestones and/or deliverables and provide a timeline for completing each.

1, 3, AND 5 YEAR ROADMAP

The roadmap builds upon key pilot activities that underway this fiscal year (identified as Year 0, SY 15):

• Install, customize, integrate, pilot, and prove the Ed-Fi data system (www.ed-fi.org) consisting of an operational data store with transactional and batch data interfaces.

• Develop, pilot and prove the single-sign-on system under development by the ESUCC.

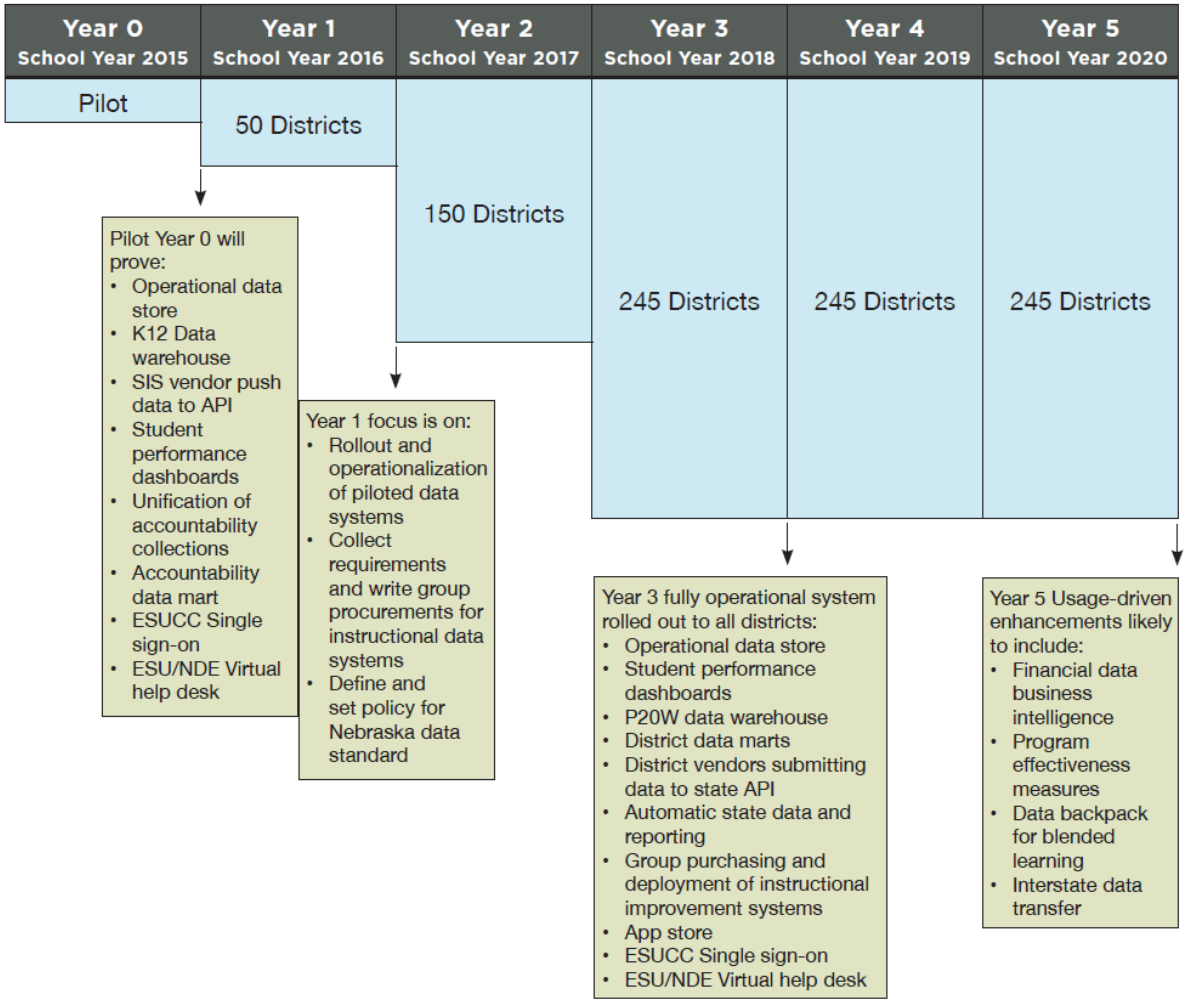
• Develop, pilot, and prove an accountability data mart, deriving accountability data from transactional data streams from the district student information systems. Accountability data will be submitted on dual paths from pilot districts, allowing the automatically derived data to be compared with their actual submissions.

• Install, customize, integrate, pilot, and prove the Ed-Fi longitudinal data warehouse and student performance dashboard.

• Use the dashboard pilots to also pilot the NDE-ESU virtual help desk to support the pilots.

These pilot activities will provide the base infrastructure to simultaneously expand and rollout the new Nebraska Education Data System over the next three years. The rollout plan targets the total districts being operational of approximately 50, 150, and ultimately 245 across years 1 through 3.

The major 1, 3, and 5-year milestones are summarized below.



In addition, the major activities associated with the work include the following by work stream and year:

Year 0 School Year 2015 Pilot	Year 1 School Year 2016 50 Districts	Year 2 School Year 2017 150 Districts	Year 3 School Year 2018 249 Districts	Year 4 School Year 2019 249 Districts	Year 5 School Year 2020 249 Districts
Nebraska					
Pilot data infrastructure	Integrate HR systems	Integrate Career Readiness	Intra-state data mobility	Interstate data mobility	
Pilot Ed-Fi dashboards	Expand and extend dashboards				
Pilot ESUCC Single sign-on	Integrate identity mgmt	Mature & scale data *infrastructure*		Integrate financial systems	
	Procure state-sponsored SIS'	Transition & support state-sponsored SIS'			
NDE Accountability Data System					
Unify NSSRS data collection	Unify CDC collection				
SIS vendors pilot data to API	Define NE Data Standard				
Pilot data mart	Build business rules	Develop state and Federal reporting		Add/modify state & Federal collections as required	
	Review & approval system	Dual submissions		Deprecate old systems	
NDE Education Intelligence System					
Install K12 data warehouse	Expand warehouse to P20W				
	Build district security	Pilot distict data marts		Develop program effectiveness analytics	
		Mature & scale data warehouse		Integrate financial data	Integrate financial analytics
Help Desk & Support					
Pilot virtual help desk	Expand capacity for ESUs + NDE Virtual Help Desk				
Nebraska Instructional Improvement System					
Define IIS requirements	Procure, deploy & train IIS tools			Student data backpack	
	Write group procurements	Develop, pilot & mature PD			
			App store		

11. Describe the training and staff development requirements.

Training and development is a critical need throughout the entire process and the collaborative relationship with the ESUCC, ESU's, Districts and the Department of Education provide a unique opportunity for coordination, support and efficiency around common standards and resources while at the same time provide opportunities for private companies to ensure innovation and advancement continues.

Continuing to build the capacity of internal staff along with contracting for specialized skills in the interim makes up the balanced approach to the work and serves as an opportunity to focus on sustainability and support for the systems in the future.

12. Describe the ongoing support requirements.

Upon the initial strategic investment and work, a core group of staff to support the continuous improvement and access to resources will be important. Through leveraging the resources saved, the potential for generating targeted service fees for software as a service (SaaS) resources through the app store and coordination within the educational system the sustainability requirements would be significantly less than the costs associated with maintaining a status quo. In addition, through the leveraged approach, third party assets continue to ensure that innovation is available, yet coordinated to support districts.

Risk Assessment (10 Points)

13. Describe possible barriers and risks related to the project and the relative importance of each.

A detailed risk analysis was conducted with the current implementation of the ADVISER dashboard and related Ed Fi technologies. Many of these risks are germane to the proposed work.

Risks

The following risk areas are identified to focus the management team on proactively taking steps to mitigate those risks. For a detailed description of project risks with associated risk mitigation strategies and contingency plans, please reference the project risk log.

- The coordination between multiple groups involved in making the project a success: SIS Vendors, Network Nebraska, NDE staff, ESUs, ESUCC and districts.
- Statewide support for technical assistance on the dashboard and Identity Management System (SSO) is being developed and staffed.
- The project is dependent upon vendor commitment to develop and support interfaces within a desired time period. If vendors are unable to meet the proposed schedule, NDE may choose to extend the integration and pilot periods to accommodate the vendor's schedule.
- If pilot districts have developed extensions for the Student Information Systems (SIS), there is a risk that these SIS extensions will not be correctly identified and will be omitted from the initial vendor interfaces and Dashboard implementation.

Nebraska ESUCC Identity Management Project

- The ESUCC Identity Management Project is being developed in parallel with the Nebraska Dashboard project. Any delays in the project may impact planned integration and pilot activities.
- The level of effort required for integration of the Identity Management and single sign on (SSO) is an estimate due to the number of pending design decisions and strategy for home realm.

Potential Rewards

- Access for Nebraska schools to an online resource that provides educators with real time data visualization to support continuous school improvement and support the instructional improvement process for Nebraska's students.
- Integration and implementation of a systemic database infrastructure supporting future expansion and efficiencies.
- The potential for an efficient methodology of collecting student and staff information freeing up resources to focus on improving the quality of data and the effective use of data for continuous school improvement.
- An identity management process that can be utilized in multiple ways in emerging and supporting digital resources for Nebraska's educators.
- Staff capacity created to support elements of sustainability.

14. Identify strategies that have been developed to minimize risks.

Multiple approaches to mitigate risk include some of the following:

- Establishing the Nebraska Education Data Standard and requirements for adoption and use in Nebraska is a critical path
- Maintaining strong governance and oversight for entire project.

- Transparency on progress and issues
- Effective use of Project Management Office
- Communication plan and Change Management implementation
- Effective hiring and procurement processes.

Financial Analysis and Budget (20 Points)

15. Financial Information

The “Financial” information tab in the Nebraska Budget Request and Reporting System (NBRRS) is used to enter the financial information for this project (NOTE: For each IT Project Proposal created in the NBRRS, the submitting agency must prepare an “IT Issue” in the NBRRS to request funding for the project.)

Attached is the budget request summary submitted in the Nebraska Budget Request and Reporting System. The budget requests include both resources for contractors as well as key personnel and positions to support the creation, coordination, collaboration and continuation of the systems approach among Nebraska school districts.

NDE Expansion
Budget Activities v2 E

Nebraska Department of Education Infrastructure Activities

				Biennium Budget Request			
				Year 0 FY 2015 SY 2014-2015	Year 1 FY 2016 SY 2015-2016	Year 2 FY 2017 SY 2016-2017	Year 3 FY 2018 SY 2017-2018
				9 Districts	50 Districts	150 Districts	245 Districts
1	**Nebraska Education Infrastructure**			*Activities and Objectives*			
			Pilot initial SIS vendor Ed-Fi interfaces	Identify and collectively procure state-sponsored SIS(s)			
	NDE will leverage the Ed-Fi infrastructure to connect source systems and drive down costs.		Pilot assessment vendor interfaces	Support SIS Vendor Ed-Fi Interfaces	$ 166,667	$ 166,667	$ 166,667
				Support assessment vendor Ed-Fi interfaces	166,667	166,667	166,667
				Other source system interfaces to Ed-Fi (HR,SRS, applications)	250,000	250,000	250,000
				Support transfer to state supported systems in years 2 and 3	166,667	166,667	166,667
				Develop identity management solution for statewide single sign-on	100,000	100,000	100,000
				ESUCC Infrastructure	500,000	500,000	500,000
				Infrastructure scaling and security audit activities	250,000	250,000	250,000
				Total Contractual Expenditures	1,600,000	1,600,000	1,600,000
				New Positions			
				Chief of Staff	60,523	60,523	60,523
				Chief Technology Officer	68,502	68,502	68,502
				Lead	60,523	60,523	60,523
				Senior	55,047	55,047	55,047
				Analyst	50,099	50,099	50,099
				Analyst	50,099	50,099	50,099
				Total Salary Expenditures	344,793	344,793	344,793
				Benefits Expenditures	165,264	165,264	165,264
				Operating Expenditures	23,805	23,805	23,805
				Travel Expenditures	10,395	10,395	10,395
				Equipment Expenditures	60,360	-	-
				Nebraska Education Infrastructure Total	**$ 2,204,617**	**$ 2,144,257**	**$ 2,144,257**
2	**NDE Data Collection System**			*Objectives*			
			Accountability Pilot - integrate CDC, Staff, NSSRS d	Statewide rollout with dual submissions (rollout plan based on SIS vendor)	$ 500,000	$ 500,000	$ 500,000
	NDE will reduce the burden of accountability data submissions on districts through automated process leveraging the Ed-Fi infrastructure.			Develop and validate state accountability reports	500,000	500,000	500,000
				Develop business rules and validation for automatic accountability submissions	250,000	250,000	250,000
				Develop and validate federal accountability report submissions	500,000	500,000	500,000
				Develop district review and approval infrastructure	250,000	250,000	250,000
				Total Contractual Expenditures	2,000,000	2,000,000	2,000,000
				New Positions			
				Director, Accountability Data Systems	68,502	68,502	68,502
				Program Specialist III	55,047	55,047	55,047
				Database Analyst Lead	60,523	60,523	60,523
				Database Analyst Senior	55,047	55,047	55,047
				Database Analyst	50,099	50,099	50,099
				Database Analyst	50,099	50,099	50,099
				Total Salary Expenditures	339,317	339,317	339,317
				Benefits Expenditures	164,380	164,380	164,380
				Operating Expenditures	23,805	23,805	23,805
				Travel Expenditures	14,070	14,070	14,070
				Equipment Expenditures	37,680	-	-
				NDE Accountability Data System Total	**$ 2,579,252**	**$ 2,541,572**	**$ 2,541,572**
3	**NDE Education Intelligence System**			*Objectives*			
			Pilot SLDS Student-Level Dashboard	Dashboard statewide rollout	$ 200,000	$ 200,000	$ 200,000
				Dashboard updates and extensions	500,000	500,000	500,000
				District data warehouses and reporting layer	333,333	333,333	333,333
				District data warehouse security layer (with and without de-identification)	250,000	250,000	250,000
				NDE data warehouse cubes and BI layer	166,667	166,667	166,667
				Total Contractual Expenditures	1,450,000	1,450,000	1,450,000
				New Positions			
	NDE will create education intelligence - access to actionable insight - through a warehouse, business intelligence tools, and increased internal capacity.			Chief Privacy Officer	79,873	79,873	79,873
				Director, Data Research and Evaluation	68,502	68,502	68,502
				Database Analyst Lead	60,523	60,523	60,523
				Database Analyst Senior	55,047	55,047	55,047
				Database Analyst	50,099	50,099	50,099
				Database Analyst	50,099	50,099	50,099
				Total Salary Expenditures	364,143	364,143	364,143
				Benefits Expenditures	168,387	168,387	168,387
				Operating Expenditures	24,510	35,510	35,510
				Travel Expenditures	17,680	17,680	17,680
				Equipment Expenditures	60,360	-	-
				NDE Education Intelligence System Total	**$ 2,085,080**	**$ 2,035,720**	**$ 2,035,720**
4	**Help Desk & Support**						
			Virtual Help Desk Pilot - Dashboards	Expand help-desk support to include Year 1,2 & 3 systems	$ 50,000	$ 50,000	$ 50,000
	NDE, along with the ESUCC and ESU's, will provide technical support for Nebraska education data systems through a virtual help desk and coordinated knowledge transfer.		PD Curriculum	Develop professional development curriculum on Year 1,2 & 3 systems	50,000	50,000	50,000
				Integrate statewide ticketing system for "virtual help desk"	166,667	166,667	166,667
				Level 4 Support and Contracts	500,000	500,000	500,000
				Total Contractual Expenditures	766,667	766,667	766,667
				New Positions			
				Director, Project Management Office	68,502	68,502	68,502
				IT Help Desk Specialist Senior	50,099	50,099	50,099
				IT Help Desk Specialist	41,706	41,706	41,706
				IT Help Desk Specialist	41,706	41,706	41,706
				Project Manager	50,099	50,099	50,099
				Project Manager	50,099	50,099	50,099
				Total Salary Expenditures	302,211	302,211	302,211
				Benefits Expenditures	158,393	158,394	158,395
				Operating Expenditures	23,805	26,555	26,555
				Travel Expenditures	10,395	10,396	10,397
				Equipment Expenditures	43,350	-	-
				Help Desk & Support Total	**$ 1,304,821**	**$ 1,264,223**	**$ 1,264,225**
				Total NDE DRE Capacity Building	**$ 8,173,770**	**$ 7,985,772**	**$ 7,985,774**
IIS	**NE Instructional Improvement System**			**Objectives**			
			Identify key systems:	Identify and collectively procure state-sponsored systems			
	NDE will build the capacity of Nebraska educators to continuously improve the quality of instruction for students through integrated, efficient systems. This will serve as an application store.		- learning management	Support vendors in integrating with SSO and state data system	$ 166,667	$ 166,667	$ 166,667
			- blended learning	Provide PD for districts	83,333	83,333	83,333
			- teacher/principal evaluation	System licenses paid by state	5,000,000	5,000,000	5,000,000
			- school climate	App Store			
			- career readiness	Survey Resources and Tools			
				Total Contractual Expenditures	5,250,000	5,250,000	5,250,000
				New Positions			
				Director, Instructional Improvement System	68,502	68,502	68,502
				Education Specialist IV	68,502	68,502	68,502
				Program Specialist III	60,523	60,523	60,523
				Applications Developer Lead	60,523	60,523	60,523
				Applications Developer Senior	55,047	55,047	55,047
				Applications Developer	50,099	50,099	50,099
				Applications Developer	50,099	50,099	50,099
				Total Salary Expenditures	413,295	413,295	413,295
				Benefits Expenditures	194,588	194,588	194,588
				Operating Expenditures	28,360	39,360	39,360
				Travel Expenditures	22,475	22,475	22,475
				Equipment Expenditures	66,640	-	-
				NE Instructional Improvement System Total	**$ 5,975,358**	**$ 5,919,718**	**$ 5,919,718**
				Total NDE DRE Budget Issue Requests	**$ 14,149,128**	**$ 13,905,490**	**$ 13,905,492**

Nebraska Information Technology Commission

Project Proposal Form

Funding Requests
for Information Technology Projects

2015-2017 Biennial Budget

IMPORTANT NOTE: Project proposals should only be submitted by entering the information into the Nebraska Budget Request and Reporting System (NBRRS). The information requested in this Microsoft Word version of the form should be entered in the NBRRS in the "IT Project Proposal" section. The tabs in the "IT Project Proposal" section coincide with sections contained in this Microsoft Word version of the form. Information may be cut-and-pasted from this form or directly entered into the NBRRS. ALSO NOTE that for each IT Project Proposal created in the NBRRS, the submitting agency must prepare an "IT Issue" in the NBRRS to request funding for the project.

Project Title	**Mainframe Migration**
Agency/Entity	**Department of Roads**

Notes about this form:

1. **USE.** The Nebraska Information Technology Commission ("NITC") is required by statute to "make recommendations on technology investments to the Governor and the Legislature, including a prioritized list of projects, reviewed by the technical panel..." Neb. Rev. Stat. § 86-516(8). "Governmental entities, state agencies, and noneducation political subdivisions shall submit all projects which use any combination of general funds, federal funds, or cash funds for information technology purposes to the process established by sections 86-512 to 86-524. The commission may adopt policies that establish the format and minimum requirements for project submissions." Neb. Rev. Stat. § 86-516(5). In order to perform this review, the NITC and DAS Budget Division require agencies/entities to complete this form when requesting funding for technology projects.
2. **WHICH TECHNOLOGY BUDGET REQUESTS REQUIRE A PROJECT PROPOSAL FORM?** See NITC 1-202 available at http://nitc.ne.gov/standards/. Attachment A to that document establishes the minimum requirements for project submission.
3. **COMPLETING THE FORM IN THE NEBRASKA BUDGET REQUEST AND REPORTING SYSTEM (NBRRS).** Project proposals should only be submitted by entering the information into the NBRRS. The information requested in this Microsoft Word version of the form should be entered in the NBRRS in the "IT Project Proposal" section. The tabs in the "IT Project Proposal" section coincide with sections contained in this Microsoft Word version of the form. Information may be cut-and-pasted from this form or directly entered into the NBRRS. ALSO NOTE that for each "IT Project Proposal" created in the NBRRS, the submitting agency must prepare an "IT Issue" in the NBRRS to request funding for the project.
4. **QUESTIONS.** Contact the Office of the CIO/NITC at (402) 471-7984 or ocio.nitc@nebraska.gov

General Information

Project Title	Mainframe Migration
Agency (or entity)	Department of Roads

Contact Information for this Project:

Name	Bill Wehling
Address	1500 Highway 2
City, State, Zip	Lincoln, NE 68516
Telephone	402-479-3986
E-mail Address	Bill.wehling@nebraska.gov

Executive Summary

The mainframe has been a valuable tool for the NDOR over the last 40 years. But as with all technologies, things change over time and organizations should evaluate the state of their applications; are we providing our users the functionality they need, are we doing it in a cost-effective manner and are we able to support these needs not just over the next few years but in the next 10 years or possibly longer.

That is what the NDOR is doing. We talked with our users about their current systems and their future needs and then looked at our current workforce and the ability to support this environment in the future as we face retirements and the ability to find the skills necessary to support the environment. We determined that the best course of action for the NDOR is to migrate our applications off of the mainframe to a platform we believe provides the functionality our users are looking for and also something that we are able to support in the future. Our plan is to create an RFP to hire an outside source either re-host or convert our mainframe applications to a technology centered on Microsoft and hosted by the Office of the CIO. An RFI has been completed that received two responses, which helped us in determining what we should budget for this project.

Goals, Objectives, and Projected Outcomes (15 Points)

1. **Describe the project, including:**
   - The goal of this project is to award an RFP to a vendor who will migrate applications from the mainframe to technology centered on Microsoft operating system, application servers and development tools. The specific objectives are;
     - Elimination of all IBM ZOS COBOL programs
     - Elimination of all IBM ZOS COBOL Batch and Report programs
     - Elimination of all IBM CICS systems
     - Elimination of all IBM DB2 and RACF
     - Elimination of dependency on IBM TSO

     There are currently multiple mainframe systems / applications consisting of approximately 1500 CICS programs with 1500 BMS maps, 1500 COBOL batch programs with 1500 procs and related 1500 JCL. There are 1300 DB2 tables which will be migrated to SQL Server 2012. We use MicroFocus tools including AppMaster Builder to generate the COBOL and BMS Maps.

- The beneficiaries of this project are the users at the NDOR who will gain additional functionality that is not available on a mainframe system and also the development team at the NDOR who will have one less development platform that they must support and maintain their skill set.
- The expected outcome of this project is all mainframe applications to be moved off the mainframe and to a Microsoft environment that will be hosted by the Office of the CIO (OCIO). We have not determined if this will be a re-host or conversion of the mainframe applications. We have not decided if we prefer to re-host the applications, convert them to Microsoft .NET framework or utilize a Commercial off the Shelf (COTS) system for a portion of the applications.

2. **Describe the measurement and assessment methods that will verify that the project outcomes have been achieved.**
   Business Technology Support Division (BTSD) development staff and database staff will work with the vendor who is awarded the RFP to determine testing strategies and implementation schedules. Testing will need to be done not only by BTSD staff but also by users on the business side to compare output from various reports and if transactions are processed correctly. Comparisons will be done to the existing mainframe systems and once all parties are satisfied with the results we will work with the OCIO to eliminate the mainframe applications.

3. **Describe the project's relationship to your agency comprehensive information technology plan.**
   This was included in our Agency IT plan which was submitted to the OCIO. It was included in previous versions as well but discussed as a future project. Within the past year we were able to complete and RFI to obtain more information on possible solutions. Our goal has been to reduce the number of tools our development, network and database staff must support to simplify their jobs and reduce their workload as well as reduce the time required to keep staff up-to-date on all the technologies that we currently support.

Project Justification / Business Case (25 Points)

4. **Provide the project justification in terms of tangible benefits (i.e. economic return on investment) and/or intangible benefits (e.g. additional services for customers).**
   Intangible benefits will depend on the direction we want to go with the movement of the applications off the mainframe. Utilizing a COTS system would provide functionality that users currently do not have but may be a more expensive option. Re-hosting the applications would meet our goal of moving off the mainframe, but the current functionality would still exist until we were able to rewrite the applications. Converting the applications to the Microsoft .NET framework would have the applications in a language we want to support, but we would still have to rewrite the applications to provide new or additional functionality. This would give us a leg up on a re-hosting option but still require us to rewrite applications, just not as much time should be required. Either way it will move us off the mainframe and allow our IT staff to lessen the number of tools they are required to support and keep current in their skill set.

   Data will be converted to SQL server tables instead of maintaining DB2 on the LAN. This will require some programming changes if we decide to choose a re-hosting option, which may increase the cost. Another one of our goals is to eliminate the need for DB2 and standardize on SQL for our database.

   A large part of the justification is the cost savings. From our analysis, we see a savings of approximately $350,000 per year once we have moved our applications off the mainframe. I have attached the document showing how we came up with the calculation based off our current mainframe payments and what we would be charged by the OCIO for servers off the mainframe.

5. **Describe other solutions that were evaluated, including their strengths and weaknesses, and why they were rejected. Explain the implications of doing nothing and why this option is not acceptable.**
   We are still trying to decide what option we want to pursue. Re-hosting the applications moves us off the mainframe quicker and we begin to see cost savings sooner, but to provide additional functionality for users would take a longer time. Converting the applications to the Microsoft .NET framework would get us off the mainframe not as quickly as re-hosting, but would be faster for us to provide additional functionality for users. Utilizing COTS system(s) would take longer than the other two but the functionality for users would be faster.

   As mentioned earlier, we have processed an RFI which resulted in two responses. The cost range from these responses were $1.4 million to $2.5 million, with re-hosting on the low end and a proposed COTS solution on the high end. We are still evaluating which direction we would like to proceed.

6. **If the project is the result of a state or federal mandate, please specify the mandate being addressed.**
   This project is not the result of any mandate.

Technical Impact (20 Points)

7. **Describe how the project enhances, changes or replaces present technology systems, or implements a new technology system. Describe the technical elements of the project, including hardware, software, and communications requirements. Describe the strengths and weaknesses of the proposed solution.**
   When completed, this project will have accomplished one of our goals to move away from the mainframe and be in a Microsoft .NET framework that we are able to support now and into the future. C# will be the main programming language and the data will also be converted to SQL from DB2, which will match another one our goals which is to standardize on one database platform.

   Internally, we have already converted a few applications from the mainframe to our .NET framework. Our users are very happy with the added functionality, such as the ability to create a “spreadsheet look and feel” for our Accounting section with our Controller Division. Also, we have replaced other mainframe applications with COTS systems because our users wanted a more modern system that is more flexible.

   The argument can be made that the mainframe is a solid platform—which I will agree with—and will be around for years to come. But what we foresee is resources will be lacking and the ability to acquire them will become costly in the future. Unless something is done either with training or teaching as part of a curriculum in universities and colleges, this could be a problem for a number of agencies in my opinion.

8. **Address the following issues with respect to the proposed technology:**
   - **Describe the reliability, security and scalability (future needs for growth or adaptation) of the technology.**
   - **Address conformity with applicable NITC technical standards and guidelines (available at http://nitc.ne.gov/standards/) and generally accepted industry standards.**
   - **Address the compatibility with existing institutional and/or statewide infrastructure.**
     The applications and related data will be moved from one platform supported by the OCIO to another platform which is also supported by the OCIO, so therefore it will comply with all NITC standards and guidelines. The OCIO is also very flexible when it comes to future growth and

provides the redundancy and backups that we requested. We are requesting a demo, QA and production environment and will utilize our change management system to track changes as well.

Preliminary Plan for Implementation (10 Points)

9. **Describe the preliminary plans for implementing the project. Identify project sponsor(s) and examine stakeholder acceptance. Describe the project team, including their roles, responsibilities, and experience.**
   Project Sponsor – Bill Wehling, BTSD Division Head
   Project Manager – Maurice Vonasek
   Technical Leads – Rodney Gonnerman and Chuck Hanson
   Data Lead – Lou Anne Daugherty
   QA Lead – Cody Lusero
   Team members from the OCIO will be determined once we have awarded an RFP.
   Stakeholders are not only members of BTSD but also the users in each Division and District offices throughout the State. We will be working with them to setup test scenarios as well as signing off on project completion

10. **List the major milestones and/or deliverables and provide a timeline for completing each.**
    Since we have not completed the RFP I cannot give any dates but are key milestones will be;
    - All IBM ZOS COBOL programs moved off the mainframe.
    - All IBM ZOS COBOL Batch and Report programs moved off the mainframe.
    - All IBM CICS systems moved off the mainframe.
    - All IBM DB2 and RACF moved off the mainframe.
    - Mainframe accessed removed for NDOR

    These are the major milestones and once we have a contract signed, we will work with the vendor to refine these milestones and determine a better set of milestones taking into account the various applications and workload of the stakeholders, which will determine when they are available to assist us.

11. **Describe the training and staff development requirements.**
    Training will depend partially on the solution that we decide on and also the vendor we choose. For example, the vendor may have software that we must utilize for some time if we go with a re-hosting option and this will require some training to use their tool. Since the majority of our development staff is already well versed in the Microsoft .NET framework, very little training will be required. We do have a three developers that will need to be trained on the .NET tools.

    As for our stakeholders, our goal is that if we re-host or convert to the .NET framework the “look and feel” will be the same as their mainframe applications.

12. **Describe the ongoing support requirements.**
    Again, this will depend on the option that we will pursue which has not yet been determined. There may be software that we must utilize for some time or there may not. Support and maintenance of the applications and data will continue by BTSD staff until the applications are no longer used.

Risk Assessment (10 Points)

13. **Describe possible barriers and risks related to the project and the relative importance of each.**
    1. Selected vendor did not have a complete understanding of the project
    2. Vendor does not supply enough resources or their resources do not meet expectations
    3. Resources are unavailable from the stakeholders, BTSD or the OCIO

4. Personnel changes for various reasons such as promotions, transfers or personal issues
5. Issues with data conversion
6. Applications identified after the RFP process that were not part of the RFP

14. Identify strategies which have been developed to minimize risks.
    1. Try to have well defined requirements in the RFP that are specific along with other expectations.
    2. Have the required skills defined in the RFP and as part of the response require experience of those who will be involved in the project. If problems occur after vendor selection then meet with the vendor to discuss possible changes.
    3. Move responsibilities around within our own division and work with other divisions to determine when resources will be available and coordinate activities to best fit with the stakeholder's workload.
    4. This may require a change in schedule in order to get someone up to speed and also reassigning of duties.
    5. Work with the vendor to develop a solution. We should also do our best to map out a data migration plan as part of the RFP. Worst case scenario is we have to convert to DB2 and then move to SQL after the project is complete.
    6. Create a change request to add additional tasks or if tools are utilized by the vendor that we must purchase, do the conversion ourselves once the initial RFP is complete.

Financial Analysis and Budget (20 Points)

15. Financial Information

The "Financial" information tab in the Nebraska Budget Request and Reporting System (NBRRS) is used to enter the financial information for this project (NOTE: For each IT Project Proposal created in the NBRRS, the submitting agency must prepare an "IT Issue" in the NBRRS to request funding for the project.)

Worksheet in Project Proposal Form.xls

Nebraska Information Technology Commission
Project Proposal Form
Section 8: Financial Analysis and Budget

	Prior Expended	FY2015 Appr/Reappr	FY2016 Request	FY2017 Request	Future	Total
1. Personnel Costs						$ -
2. Contractual Services						
2.1 Design			$ 300,000.00	$ 300,000.00		$ 600,000.00
2.2 Programming			$ 700,000.00	$ 700,000.00		$ 1,400,000.00
2.3 Project Management			$ 200,000.00	$ 200,000.00		$ 400,000.00
2.4 Other						$ -
3. Supplies and Materials						$ -
4. Telecommunications						$ -
5. Training						$ -
6. Travel						$ -
7. Other Operating Costs						$ -
8. Capital Expenditures						
8.1 Hardware			$ 25,000.00	$ 25,000.00		$ 50,000.00
8.2 Software			$ 25,000.00	$ 25,000.00		$ 50,000.00
8.3 Network						$ -
8.4 Other						$ -
TOTAL COSTS	$ -	$ -	$ 1,250,000.00	$ 1,250,000.00	$ -	$ 2,500,000.00
General Funds						$ -
Cash Funds			$ 1,250,000.00	$ 1,250,000.00		$ 2,500,000.00
Federal Funds						$ -
Revolving Funds						$ -
Other Funds						$ -
TOTAL FUNDS	$ -	$ -	$ 1,250,000.00	$ 1,250,000.00	$ -	$ 2,500,000.00

Mainframe Data and Application Cost Estimate

CURRENT COST ESTIMATE:

Average Monthly Mainframe Expenses for last 24 months		=	$ 32,454
Assumption:	$32,000 per month for mainframe usage		
Cost per Year:	($32,000/month) X (12 months)	=	$384,000
	TOTAL CURRENT COST	**=**	**$384,000**

FUTURE COST ESTIMATE:

Current Units on Mainframe:	134,461.67 cylinders (This is both data and applications)		
Converted to GB:	106.22 GB (This is for both production and test)		
Assumption:	Each environment is 55GB and we need PROD, QA and DEMO		
Space Requirement:	165 GB (55 GB X 3 Environments)		
Assumption:	12 Servers (4GB) will be required		
Cost per Year:	(165 GB) X ($0.20/GB/Month) X (12 Months)	=	$ 396
	(12 Servers) X ($127.50/Server) X (12 Months)	=	$ 18,360
	TOTAL FUTURE COST	=	$ 18,756
	ASSUMED FUTURE COST	**=**	**$ 20,000**

ASSUMED COST SAVINGS ESTIMATE PER YEAR:

$384,000 - $20,000	**=**	**$364,000**

Nebraska Information Technology Commission

Project Proposal Form

Funding Requests
for Information Technology Projects

2015-2017 Biennial Budget

IMPORTANT NOTE: Project proposals should only be submitted by entering the information into the Nebraska Budget Request and Reporting System (NBRRS). The information requested in this Microsoft Word version of the form should be entered in the NBRRS in the "IT Project Proposal" section. The tabs in the "IT Project Proposal" section coincide with sections contained in this Microsoft Word version of the form. Information may be cut-and-pasted from this form or directly entered into the NBRRS. ALSO NOTE that for each IT Project Proposal created in the NBRRS, the submitting agency must prepare an "IT Issue" in the NBRRS to request funding for the project.

Project Title	**Stock Supply System**
Agency/Entity	**Department of Roads**

Notes about this form:

1. **USE.** The Nebraska Information Technology Commission ("NITC") is required by statute to "make recommendations on technology investments to the Governor and the Legislature, including a prioritized list of projects, reviewed by the technical panel..." Neb. Rev. Stat. § 86-516(8). "Governmental entities, state agencies, and noneducation political subdivisions shall submit all projects which use any combination of general funds, federal funds, or cash funds for information technology purposes to the process established by sections 86-512 to 86-524. The commission may adopt policies that establish the format and minimum requirements for project submissions." Neb. Rev. Stat. § 86-516(5). In order to perform this review, the NITC and DAS Budget Division require agencies/entities to complete this form when requesting funding for technology projects.
2. **WHICH TECHNOLOGY BUDGET REQUESTS REQUIRE A PROJECT PROPOSAL FORM?** See NITC 1-202 available at http://nitc.ne.gov/standards/. Attachment A to that document establishes the minimum requirements for project submission.
3. **COMPLETING THE FORM IN THE NEBRASKA BUDGET REQUEST AND REPORTING SYSTEM (NBRRS).** Project proposals should only be submitted by entering the information into the NBRRS. The information requested in this Microsoft Word version of the form should be entered in the NBRRS in the "IT Project Proposal" section. The tabs in the "IT Project Proposal" section coincide with sections contained in this Microsoft Word version of the form. Information may be cut-and-pasted from this form or directly entered into the NBRRS. ALSO NOTE that for each "IT Project Proposal" created in the NBRRS, the submitting agency must prepare an "IT Issue" in the NBRRS to request funding for the project.
4. **QUESTIONS.** Contact the Office of the CIO/NITC at (402) 471-7984 or ocio.nitc@nebraska.gov

General Information

Project Title	Stock Supply System
Agency (or entity)	Department of Roads

Contact Information for this Project:

Name	Bill Wehling
Address	1500 Highway 2
City, State, Zip	Lincoln, NE 68502
Telephone	402-479-3986
E-mail Address	Bill.wehling@nebraska.gov

Executive Summary

The existing supply system application is mainframe based and has been in production for over 15 years. This has been a useful tool for the Procurement section of the Operations Division and it has made it easier for all Divisions and District to order supplies necessary for them to do their day to day operations.

As with all software applications and with hands on day-to-day operations, there comes a time when users determine new needs, see opportunities to make improvements and take advantage of newer technologies. Moving applications off of the mainframe is but one of the Business Technology Support Division's (BTSD) goals. NDOR is a Microsoft based shop utilizing newer technologies such as C#/.NET and SQL Server 2012 while our software development methodology follows the Agile practice.

The goal of this project is finding or developing a system to provide for a warehouse management system (WMS) of supplies that will replace the legacy Supply Inventory System (SUP). The goal is to have a system that will allow for inventory control/monitoring of stock, ordering, receiving, picking, replenishments, shipping and returns while utilizing Radio Frequency Identification (RF) devices or other similar electronic scanning functionality. The WMS should also provide substantial reporting features that will help with overall WMS management. I have attached a Business Process Modeling report produced in-house which outlines the current Stock Supply system and describes what NDOR had envisioned to be a suitable replacement for the current system.

Goals, Objectives, and Projected Outcomes (15 Points)

1. **Describe the project, including:**
   - **Specific goals;**
     - Eliminate as much paper as possible
     - Utilize electronic/digital signatures
     - A new and improved equation to determine how much should be ordered when a stock item needs to be replenished.
   - **and objectives;**
     - The system shall allow ease of use for end users when they are entering orders of product(s) to be fulfilled and delivered to their division, district or other entity in a timely manner.
     - The system shall allow for ease of use with open-order modification or order cancellation.

- The system shall provide for an application program interface (API) with NDOR's Cost (CST) & Roads Financial Edit (RFE) systems. When orders are processed or a return of merchandise back to inventory or return back to a supplier is necessary; the API will exchange information about the order. At minimum, the information sent to the CST/RFE systems; Item Number, Quantity, Unit of Measure, Activity Code, Account Code, Unit Cost, Highway Number, Beginning Reference Post, Ending Reference Post, Project Number, Structure Number (if applicable), Organizational Element (OE). This will allow NDOR to reflect inventory adjustments within the Cost Accounting system.
- The system shall be able to track multiple locations of an item in the Warehouse (tracking quantities for each location) and be able to allow multiple items in a bin location. (Includes locations for low units of measure (LUM), case and bulk items)
- The system shall allow for the use of barcode readers, bar code/label printing and accept the download of data from hand-held devices for such activities as receiving, puts, picks, cycle counts and shipping verification.
- The system shall be capable to allow for use of RF/RFID and bar coding technologies for retrieval or count purposes. (voice recognition technology is not required)
- System shall be able to direct "put aways" to a matching location otherwise allow for random storage based on physical item type with the system allowing for manual override. (Refer to storage policy/assignments listed in Current Environment overview)
- The system shall handle receiving/replenishment processes.
- The system will queue open purchase orders and allow for prompt by item number.
- The system shall provide the ability to create "pick" and "put away" event tasks with location, dates and stock numbers and associated bar code labels.
- The system will allow pickers to scan/fulfill orders with hand-held directed picking in various warehouse locations as well as those for the out-of doors yard locations.
- The system should have the ability to track and report product expiration and shelf life left.
- The system will provide the capability to manage pre-receipt shipments including those for pre-receipt rejected items which are awaiting resolution.
- The system shall provide the ability to track product being inspected before it is formally received including first article inspections. System should track all inspection data including stock number, quantity, inspection requirement and date of inspection.
- The system shall provide the ability to create, in an optimized geographic order, picks, puts away and cycle counts and allow for operator override.
- The system will not allow back orders. Orders are to be limited to available stock on hand.
- The system will allow for ease of maintenance of packing slips.
- The system shall be able to handle units of measure conversion processes as necessary.
- The system shall be able to process cycle counts by item or item location.
- The system must be able to operate all warehouse functions during the cycle count process.
- The system shall support user-friendly ad-hoc report writing and querying capabilities.
- The system will provide an on-line transaction trail of the various automated activities with search and review features.
- The system shall have the ability to track purchasing history to assist in determining stock replenishment needs.
- The system shall provide for measurement and reporting of employee productivity.
- The system shall provide authorization/security integration options.
- The system shall provide for ease of handling product returns from the Divisions/Districts.
- The system shall be able to print out packing slips for returns to vendors.
- The system shall provide for optimization of order fulfilment, picking, receiving, replenishing and shipping processes.
- The system will provide for substantial reporting features to aid in the management and administration of all WMS functions.
- System will be required to support 300+ concurrent users which include supervisors and clerks with an anticipated three system administrators.

- **Expected beneficiaries of the project**
  Users will be able to see the products they want to acquire while they are ordering. Currently, if they want to see what they want to order, the must go to a folder on one of our servers and find the item number so they can see a picture to make sure they are ordering the correct item. The pickers will be able to utilize scanners so they can minimize errors when taking items out of stock. Our procurement section will be able to monitor our supply easier and have more reporting capabilities than the current system.

- **Expected outcomes.**
  A system that will decrease the number of errors in our deliveries, allow us to do a better job of coordinating purchase, simplify the purchasing experience for our users, and make it easier to track supplies.

2. **Describe the measurement and assessment methods that will verify that the project outcomes have been achieved.**
   Track the number of calls received that orders were incorrect. After the system has been in place for three to six months, survey the users to see how they like the new system. Spot inventories to make sure items are located where they should be and the number of items matches what is shown in the inventory. How many times paper copies of the orders must be printed in order to complete an order. Over a period of one year, see how close our item inventories match with purchases based off the new equation that is developed for restocking our system and track the number of times items have been out of stock.

3. **Describe the project's relationship to your agency comprehensive information technology plan.**
   The NDOR has a goal of migrating what they have on a mainframe environment to a Microsoft based environment utilizing the Microsoft .NET framework and SQL Server for our database. We want to decrease the number of tools we have to maintain and support in our technology area. This RFP will look at purchasing a system that will allow us to eliminate a number of mainframe applications and databases without having to spend the time and effort converting them off of the mainframe.

Project Justification / Business Case (25 Points)

4. **Provide the project justification in terms of tangible benefits (i.e. economic return on investment) and/or intangible benefits (e.g. additional services for customers).**
   A new system that takes advantage of current technology will allow us to;
   1. Save money by taking less time to create orders
   2. Less time in correcting orders,
   3. Save money when the wrong items are ordered
   4. Save money so we do not order too many items which may run out of warranty and cannot be used.
   5. Save money so we do not order too few items which may run out and then cause delays in projects or maintenance repairs, which could lead to safety issues.
   6. Make it easier for the pickers to find their items and pick the correct amount by using scanners.
   7. Better user interface so people can see what they are ordering and see how many are in stock.

5. **Describe other solutions that were evaluated, including their strengths and weaknesses, and why they were rejected. Explain the implications of doing nothing and why this option is not acceptable.**
   We cannot do nothing because our users are not satisfied with the current system. There are a number of issues and they do not like the current interface or the fact they must go to multiple screens to accomplish a single task. It is also part of our technology plan to move away from the mainframe environment.

   We considered rewriting the application but we do not have experience in scanner technology. This would take a considerable amount of time to get developers up to speed. We also talked with DAS about the current JD Edwards system and we believe that JD Edwards will be responding to our RFP once it is ready for publishing.

6. **If the project is the result of a state or federal mandate, please specify the mandate being addressed.**
   This project is not the result of a state or federal mandate, but it is part of the NDOR's technology plan to move away from the mainframe environment.

Technical Impact (20 Points)

7. **Describe how the project enhances, changes or replaces present technology systems, or implements a new technology system. Describe the technical elements of the project, including hardware, software, and communications requirements. Describe the strengths and weaknesses of the proposed solution.**
   The project will replace a mainframe system which has a number of issues and is not user friendly. Reporting is a problem as well, with users not being able to run certain reports until a specific time or it will cause problems with the database and data must be recovered. Bar code scanners for the pickers to collect the items on orders will be new technology for us. We do utilize bar code scanners now to hardware inventory, but this will not only track but also work with orders as well and make sure they are completed properly. Depending on the solution, hardware and software may be required and we will utilize the OCIO server environment as needed. We will also need to purchase wireless access points to be placed in various places at our Operations location. These will need to be secured and we will work with the appropriate security teams as needed.

   The look and feel of the application will be a plus for our users and our Procurement section in the Operations Division. Being able to see what you are buying instead of having to open an explorer window to go to a server folder and lookup an item picture will save time. When talking with users, the look and feel of sites such as Amazon.com and Cornhusker State Industries were brought up as examples of what they would like to see in a new system.

   The new system will also need to communicate with our financial systems. Interfaces will need to be developed to send information back and forth between the systems such as purchase, unit costs, and report discrepancies if they are found.

8. **Address the following issues with respect to the proposed technology:**
   - **Describe the reliability, security and scalability (future needs for growth or adaptation) of the technology.**
   - **Address conformity with applicable NITC technical standards and guidelines (available at http://nitc.ne.gov/standards/) and generally accepted industry standards.**
   - **Address the compatibility with existing institutional and/or statewide infrastructure.**
     The applications and related data will be moved from one platform supported by the OCIO to another platform which is also supported by the OCIO, so therefore it will comply with all NITC

standards and guidelines. If a web-based solution is selected we may need to get an exception to the web policies if there is a conflict or see if the vendor can modify their website. The OCIO is also very flexible when it comes to future growth and provides the redundancy and backups that we requested.

Preliminary Plan for Implementation (10 Points)

9. **Describe the preliminary plans for implementing the project. Identify project sponsor(s) and examine stakeholder acceptance. Describe the project team, including their roles, responsibilities, and experience.**
   Project Sponsors – Tom Sands, Operations Division Head
   Project Manager – Maurice Vonasek, BTSD Project Management Officer
   Business Team Leader – Steve Biltoft, NDOR Materiel Control Manager
   Data Team Leader – Lou Anne Daugherty, NDOR Data Warehouse Manager or one of her staff
   Other stakeholders include; Procurement section in Operations, warehouse staff and pickers, accounting clerks in our Controller Division, and users of the system in Division and District offices.

10. List the major milestones and/or deliverables and provide a timeline for completing each.
    This one is difficult since we just completed an RFI and have not yet determined how we want to write the RFP. Speaking on a high level, major milestones after the RFP is awarded;
    System overview
        Identification of data and data sources
        Review of current system
    Development of user interface
    Development of system interfaces
    Conversion of data
    Bar code system developed
    Bar codes added to inventory items
    Training and Implementation plans developed
    Complete training
    Shut off the mainframe system and go live

11. **Describe the training and staff development requirements.**
    A number of training sessions will need to occur. Learning how to use the bar code scanners may take some time. Users will need to be trained on using the new system as well, but it should be limited if we can have a look and feel similar to other purchasing experiences they have had. We may have some who need a little more assistance but that can be done on a case by case basis.

12. **Describe the ongoing support requirements.**
    Frontline support will be done by members of the Procurement section in Operations Division. Anything that they cannot figure out will be sent to the vendor as part of an ongoing maintenance and support agreement. Issues with bar code scanners will need to be handled by the vendor. Interfaces that must be written could be handled by the vendor or by BTSD staff, depending on the cost and the language they are written in.

Risk Assessment (10 Points)

13. Describe possible barriers and risks related to the project and the relative importance of each.

1. Selected vendor did not have a complete understanding of the project
2. Vendor does not supply enough resources or their resources do not meet expectations
3. Resources are unavailable from the stakeholders, BTSD or the OCIO
4. Personnel changes for various reasons such as promotions, transfers or personal issues
5. Issues with data conversion
6. Applications identified after the RFP process that were not part of the RFP

14. Identify strategies which have been developed to minimize risks.

1. Try to have well defined requirements in the RFP that are specific along with other expectations.
2. Have the required skills defined in the RFP and as part of the response require experience of those who will be involved in the project. If problems occur after vendor selection then meet with the vendor to discuss possible changes.
3. Move responsibilities around within our own division and work with other divisions to determine when resources will be available and coordinate activities to best fit with the stakeholder's workload.
4. This may require a change in schedule in order to get someone up to speed and also reassigning of duties.
5. Work with the vendor to develop a solution. We should also do our best to map out a data migration plan as part of the RFP. Worst case scenario is we have to convert to DB2 and then move to SQL after the project is complete.
6. Create a change request to add additional tasks or if tools are utilized by the vendor that we must purchase, do the conversion ourselves once the initial RFP is complete.

Financial Analysis and Budget (20 Points)

15. Financial Information

The "Financial" information tab in the Nebraska Budget Request and Reporting System (NBRRS) is used to enter the financial information for this project (NOTE: For each IT Project Proposal created in the NBRRS, the submitting agency must prepare an "IT Issue" in the NBRRS to request funding for the project.)

Worksheet in Project Proposal Form.xls

Nebraska Information Technology Commission
Project Proposal Form
Section 8: Financial Analysis and Budget

	Prior Expended	FY2015 Appr/Reappr	FY2016 Request	FY2017 Request	Future	Total
1. Personnel Costs						$ -
2. Contractual Services						
2.1 Design			$ 75,000.00	$ 75,000.00		$ 150,000.00
2.2 Programming			$ 75,000.00	$ 75,000.00		$ 150,000.00
2.3 Project Management			$ 30,000.00	$ 30,000.00		$ 60,000.00
2.4 Other						$ -
3. Supplies and Materials						$ -
4. Telecommunications						$ -
5. Training						$ -
6. Travel						$ -
7. Other Operating Costs						$ -
8. Capital Expenditures						
8.1 Hardware			$ 20,000.00	$ 20,000.00		$ 40,000.00
8.2 Software			$ 100,000.00	$ 100,000.00		$ 200,000.00
8.3 Network						$ -
8.4 Other						$ -
TOTAL COSTS	$ -	$ -	$ 300,000.00	$ 300,000.00	$ -	$ 600,000.00
General Funds						$ -
Cash Funds			$ 300,000.00	$ 300,000.00		$ 600,000.00
Federal Funds						$ -
Revolving Funds						$ -
Other Funds						$ -
TOTAL FUNDS	$ -	$ -	$ 300,000.00	$ 300,000.00	$ -	$ 600,000.00

NDOR SUPPLY SYSTEM
BUSINESS PROCESS MODELING

TEAM MEMBERS:

DARCY MELBYE
JOHN LOCHNER
CHUCK HAGEN
JIM LAUGHLIN
MIKE MATTISON
LINDA SOULLIERE
RANDY JONES
STEVE BILTOFT
GLORIA RYKEN
TERESA VANOVER
RITA KUCERA
TOM RENNINGER
CYNDY ROTH
BILL WEHLING

JUNE 27, 2014

TABLE OF CONTENTS

EXECUTIVE SUMMARY

The existing supply system application has been in production for over 15 years. While it has been a useful tool for not only the Procurement section of the Operations Division, but made it easier for all Divisions and District to order supplies necessary for them to do their day to day operations. But as with all software applications, there comes a time when users determine new needs and see opportunities to make improvements and take advantage of new technologies. Another factor to consider is the goal of BTSD to move all applications off of the mainframe. BTSD is looking at either rewriting applications or attempting to buy Commercial Off the Shelf (COTS) products.

So a team has spent the last year going over the existing applications and reviewing existing processes. Discussions also included the needs and goals of the system as well. The team then spent time developing how they want the processes to work in their new application. Mockups of certain screens were developed by the team to give either a vendor or development team an idea of what we are looking for in a new system.

SYSTEM GOALS AND NEEDS

Three ultimate goals were identified;

1) Eliminate as much paper as possible
2) Utilize electronic/digital signatures
3) A new and improved equation to determine how much should be ordered when a stock item needs to be replenished.

The first two goals are tied together. There are numerous copies of purchase orders and other documents that must be routed and signed off by a number of people. We want to be able to utilize workflow capabilities to rout documents for approval and allow supervisors and others to sign documents electronically.

The final goal is a new equation for replenishing stock items. This equation was developed a number of years ago, and is used to determine how much of an item should be ordered when the quantity on hand is at or below the minimum allowable. Appendix A shows the equation. As you can see, it utilizes the amounts issued, the minimum and maximum allowable amounts for the item and takes into account the time of year as well. The Operations Division, specifically the procurement unit, will need to come up with a new equation before any work can be done on the Ordering and Receiving Supplies process.

Appendix B is a list of needs that the team developed during their first meeting and into the second as well. This was a brainstorming list and there may be some similarities, but there are a number of great ideas that can improve their business and make life a lot easier for those who order supplies, maintain the supply base manage the warehouse. One of those ideas is to utilize scanning devices for when orders are taken from the warehouse, shipped and eventually delivered. Utilizing either bar codes or RFID (Radio Frequency Identification) tags could possibly help improve the picking process in the warehouse as well as ensuring deliveries are correct.

FIELD ORDERS/STOCK ORDERS; CURRENT AND FUTURE PROCESS

Appendix C is the existing process. In order to create an order, you must either search through the items in the system or look through a server folder (\\dorimage3\operations\Stockphotos) to view pictures of the items. Then they can place the order. The supervisor has to be told that they have an order to approve; there is no automatic notification. The only way that Stock Control knows orders have been submitted is by checking batch job submittals every fifteen minutes. A number of copies are made of each order with information being written on each order. Orders must be modified to show when they have been shipped, returned or back ordered.

The new system will allow users to view what it is they want to order while they are ordering it. Appendix D shows the new workflow. Notifications will be done using e-mail instead of having to print orders and giving to supervisors or calling them to let them know there are orders they must approve. The utilization of scanners will allow the verification that items that have been ordered, loaded and shipped to the proper locations. Mockups of screens were developed and will be discussed in a future section.

Consideration must also be given to external agencies that will be ordering supplies from us as well. The difference for them is they will be limited on what they can order and will not be allowed to return items.

ORDERING SUPPLIES; CURRENT AND FUTURE PROCESSES

Appendix E shows the existing process. This process involves creating a report to show how much of each stock item is on hand and then determining if it is time to replenish certain stock items. If the decision is yes, then there are multiple manual entries in the existing system and paper copies that are routed around. Phone calls or e-mails must be sent to various individuals who are responsible for checking orders or testing stock items to ensure they meet specifications.

The new system will notify them automatically when they are at or below the minimum number of items for each stock item. A decision will need to be made as to using just the defined minimum amount or a percentage within the minimum amount (e.g., within 10% of minimum) when notifications will start. A workflow component will be built in so when tasks are completed notification is sent automatically to the person who must complete the next task and so on. The M&R notification will not always be the same person or persons; it varies depending on what item needs to be tested. Having the M&R forms in the system as well would be a "nice to have" or the ability to upload and save them. The ability to save any e-mails would be needed as well. Appendix F shows the new process.

RETURNS; CURRENT AND FUTURE PROCESSES

Appendix G shows the current review process. There is a lot of manual entry into the system and notifications are done by phone or manually sending e-mails. Stock Control is not aware of any returns until they check batch job submittals, which is done every 15 minutes. Paper copies of the purchase orders are sent back and forth between Stock Control, Buyers and Controller as well. The process is the same for all types of returns.

The new process is slightly different depending on the type of return. Appendix H shows the process. It will show the previous orders of an individual and allow them to return all or parts of the order(s). Notifications to Stock Control will be automatic and routing of information will be electronic instead of shuffling paper. Another key notification is an e-mail to the person submitting the return if the item(s) have not been returned in fifteen days. If they have not returned the item(s) in thirty days, then they will be notified that the return will be deleted and Stock Control will be notified of the deletion as well.

BACK ORDERS; CURRENT AND FUTURE PROCESSES

Appendix I shows the current back order process. Reports must be printed off in order to see what is still on back order and the status of the inventory. As stock items are received, a decision needs to be made on what orders to fill. Then the system needs to be modified to finalled, shipped or still on back order.

The new process for back orders is that there will be no back orders. The goal is for the system to show the person ordering the amount that is on hand and not allowing any orders over the amount on hand. The system will also need to be dynamic so if two people are ordering it will update the amount if one person completes an order before the other. For example, there are 100 units on hand and two people are ordering. Person 1 needs 75 and person 2 needs 50. Person one completes their order for 75. When person 2 goes to submit their order, the system should tell them that there are now only 25 so they can only order 25 and must check back when more is on hand.

SIGN ORDERS; CURRENT AND FUTURE PROCESSES

Appendix J is the current Sign Order process. This process is only for signs that are not kept in stock by Stock Control and are special ordered through Cornhusker State Industries (CSI). This process will continue to be used. The only change they would like to implement would be to utilize bar codes or RFID tags to track the arrival and delivery of the signs to various offices. The process could be improved utilizing a workflow solution such as the State's enterprise process management system OnBase, but that would be a separate project after implementation of a new supply system.

Signs that are kept in stock will be purchased using the new process outlined in the "Field Orders/Stock Orders…" section on page 2.

INVENTORY MAINTENANCE FUNCTIONS

The ability to add, delete and modify stock items will be a requirement. This capability should only be done by Stock Control. Screen SUPX110 (Appendix K) is the screen used in the current mainframe system to update the inventory.

The team spent some time looking at the current inventory process as well. The process was mapped out in Appendix L. The process involves the printing and review of a number of reports and a person(s) physically counting inventory. Even with the improvements of a new system, there will still be a need to count inventory to ensure we have the proper amounts that are shown in the system. So the current process will remain in place. The only difference will be the generation of the reports. They may be done on demand and with no restrictions as to when the reports are generated. As with the old system, when it is time to do an inventory the system must be locked to not allow any purchases on items that are within the inventory area.

CONNECTIONS WITH FINANCIAL SYSTEMS

When requisitions are filled and marked as finalled, the information about what was purchased is sent to the Cost system. At a minimum, the information sent to the Cost system is the activity code, account code, the cost and the OE. Further investigation will be required to find out the exact information that is required by the cost system. We also discovered a connection to a PDS (Payroll Detail System) program. The Department is beginning a project to replace PDS with KRONOS and once that implementation is complete, we do not see a need for a connection to any payroll system. Further investigation should be completed to make sure this is a correct decision.

One requirement of the old system was the need to input Highway number and reference post when purchasing items. If certain activity or account codes were used, the person filling out the requisition was required to enter a Highway number and reference post (beginning/ending or only beginning). The team does not see a need for this requirement. When supplies are ordered, they are ordered in bulk because at that time, they do not know where they will be using those supplies. So when they are required to put in this information, it may not be used at the location listed or it is partially used at the location listed. If this information is transferred from the cost system to our Highway maintenance system (IHI), it is not accurate information; higher costs at one location and zero costs at other locations where the items may have been used. Another factor is the majority of costs in the supply system are not charged to a highway and reference post. Over the past year, only 6% of the $3.2 million spent out

of the supply system was charged in that manner. Therefore, the team recommends not requiring a Highway number and reference post for the supply system. If this information is required, it should be input on crew cards when the supplies are actually being used at the correct location.

REPORTING

The old system had a number of reports that were used and also a number that are no longer useful. Some of the reports were dependent on shutting the system down so no transactions can occur while the report is generated. This needs to be changed so reporting can be done at any time. The use of the NDOR reporting system, SQL Server Reporting Services (SSRS) should be looked at for reporting as well. The reports could be scheduled to generate on a schedule so users will not need to manually create the reports. The ability to create ad hoc reports is desired as well. Accessing the data to generate any type of report that could be used to help in making decisions about purchasing, budgeting, etc. are an important part of any system.

Appendix M contains examples of the various reports that are created in the current system. The first two pages of the appendix is a list of those reports, including if they are still required in the new system and additional information that they would like to have on various reports as well. The final three pages of the appendix is a process that is run by Controller Division to determine if there are any discrepancies between what was paid and what was charged. If discrepancies are found, Controller Division works with the Buyers in Operations Division to make the necessary corrections. Page M-31 is the JCL that Controller runs in order to generate the report on the final two pages.

In between the first two pages and the last three pages are the reports from the system. First is the back order report, which will no longer be needed with the new system but was included in the report for information only. The rest is divided between the daily, weekly, monthly and yearly reports. Some reports are found in multiple groups, such as SUPB290 is in both the monthly and yearly batch jobs as well as SUPB230, which is found in the daily and monthly reports.

ADMINISTRATIVE FUNCTIONS

There needs to be an administration portion that will allow the administrators of the system to add, remove or modify users of the system. They will need to allow users to create, modify and/or approve requisitions. The administrators of this application need to be determined. Someone or some group from Operations Division should be the administrators and that determination should be made by the Operations Division Manager.

MOCKUPS OF APPLICATION SCREENS

A number of mockups for new screens were developed. Appendix N shows the various screens that the team believes would make it easier for not only Stock Supply and Buyers but also the users throughout the Department.

The first page is two logon screens; one for internal and the other for external users. For the external users, their login limits them to what they are able to order out of the system. They are also not allowed to return items. Internal users will login and then select their location. Each user may be ordering for multiple locations or only one location. Their selection will determine where the order will be delivered.

Page two is the mockup of the new maintenance screen. In the mockup, pull-downs are used instead of typing in values and the ability to add a photo of the item instead of keeping a separate folder on a server which contains all the item photos. Also, an input field for the description that allows them more characters than the current system so they do not have to use abbreviations.

Pages three and four of the mockups show the screens for the ordering of supplies. Page three allows the user either search by entering keywords or picking a category and scrolling through the items. A thumbnail of the pictures can be hovered over to bring up a full scale copy of the image. They will be shown the amount on hand and then allowed to enter the quantity they want. They can click on the cart button and a drop down will show the items in their cart. When completed, they will click on the "Proceed to Checkout" which will take them to the screen on page four.

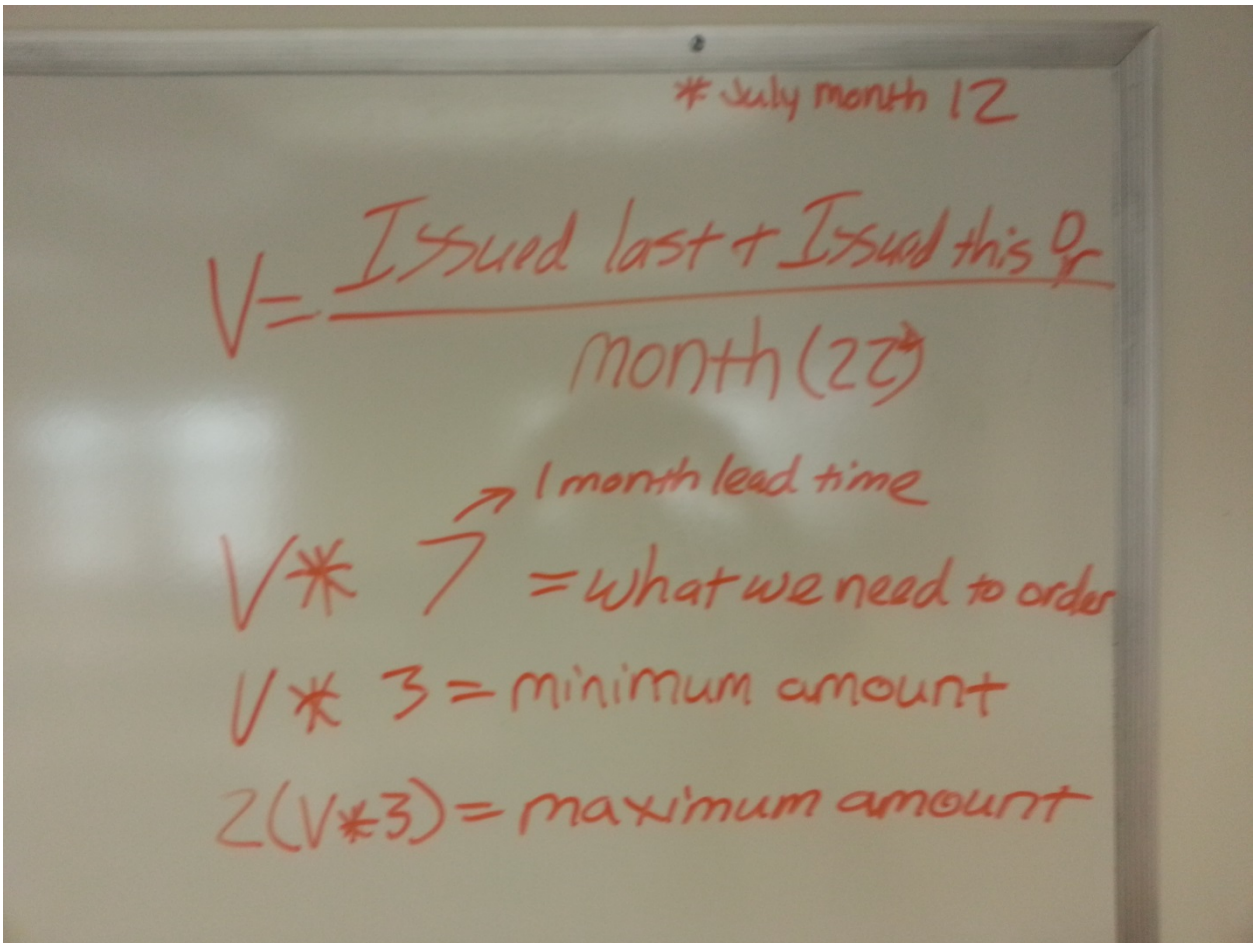
The screen on page four is the summary page and also where they would pick the activity code for each item. They can also change the number of items ordered as well and delete items before submitting their order.

The screens on pages five and six are for returns when items have been damaged. The page five screen allows them to choose a range of dates of their previous orders. Retention rules allow only three years of orders to be stored in the system. For all returns they must enter a reason for the return. When they click on "Process Return" they are taken to the screen on Page six.

The screen on page six shows the information on the return and generates a bar code that will be scanned when the item(s) are picked up and then when they are dropped off back at the warehouse in Lincoln. This form will be printed off and kept with item(s) being returned.

The screens on pages seven and eight are similar to the screens on page five and six with the exception that they are for surplus instead of damages. As with the previous screens, they must have a reason for wanting to surplus the items and print off the form with the bar codes to be returned with the items.

APPENDIX A – Stock Replenishment Equation



APPENDIX B – Supply System Needs

1) A better ordering process for Districts, Divisions and Procurement (including vendors)

2) Eliminate the requirement of a Highway Number and Reference Post for ordering certain stock items.

3) Improved delivery process

4) Utilize bar codes for individual items and groups (bundles, boxes, etc.)
    a. Match a manufacturer number/code with our number/code or
    b. Send manufacturer our bar code
    c. Would this allow us to eliminate class numbers and stock numbers?

5) Purchase orders include the vendor names, class numbers and stock numbers.

6) A search button on home screen and various item screens.

7) Back button on screens so you don't have to leave one to go to another then back.

8) A system similar to a Shopping Cart such as the CSI Nebraska website or NDOR Storefront.
    a. Order as many items as needed (Currently limited to six items per screen but unlimited number of pages as needed.)
    b. Tabs for each class code with items listed below with a brief description
    c. Click on an item gives a full description, picture, cost, unit-of-measure and if it is on back order
    d. Needs to have a back button to go back to the main screen

9) Need to have keywords for every item and must be able to modify them. Multiple keywords for each item to make it easier to find what you need.

10) User has the ability to change the quantity they want when selecting the items or during checkout.

11) Prices fluctuate so must be able to update prices during checkout and track different prices for similar items
    a. Example: Have 50 "X" at $5 each then order 100 "X" at $6 each. Need to keep them separate and not average the costs for all items.

12) Login process since orders are not only internal but by Cities and Counties as well.
    a. Allows us to differentiate between NDOR and Cities/Counties

13) Supervisors still must approve orders and returns internally
    a. Cities and Counties do not need approvals

APPENDIX B – Supply System Needs

14) Administrator function to add the people who order items and approvers including setting privileges.

15) Should we be charging shipping and handling on Cities and Counties?

16) Eliminate the need for a Back Order process.

17) Ability to check and uncheck items to allow them to be available or unavailable for purchasing
    a. Mainly for Cities and Counties so needs of Districts and Divisions are filled first

18) Items that have been deleted or modified must be archived according to the Operations Division's retention schedule

19) Can we setup procurement cards for Cities and Counties? Or use PayPal like we do for Storefront?

20) Automate the "Ship To" address
    a. Able to modify the address if needed
    b. Tied to the DOR number of City/County Name who logs in

21) System notifies Stock Control that orders are below the required amount

22) Ability to track purchase history to assist in determining stock needs

23) Ability to take into account seasonal factors for ordering

24) Tracking and notification of products which have a shelf life

25) Ability to override the maximum amount that can be ordered when replenishing what is kept in stock.

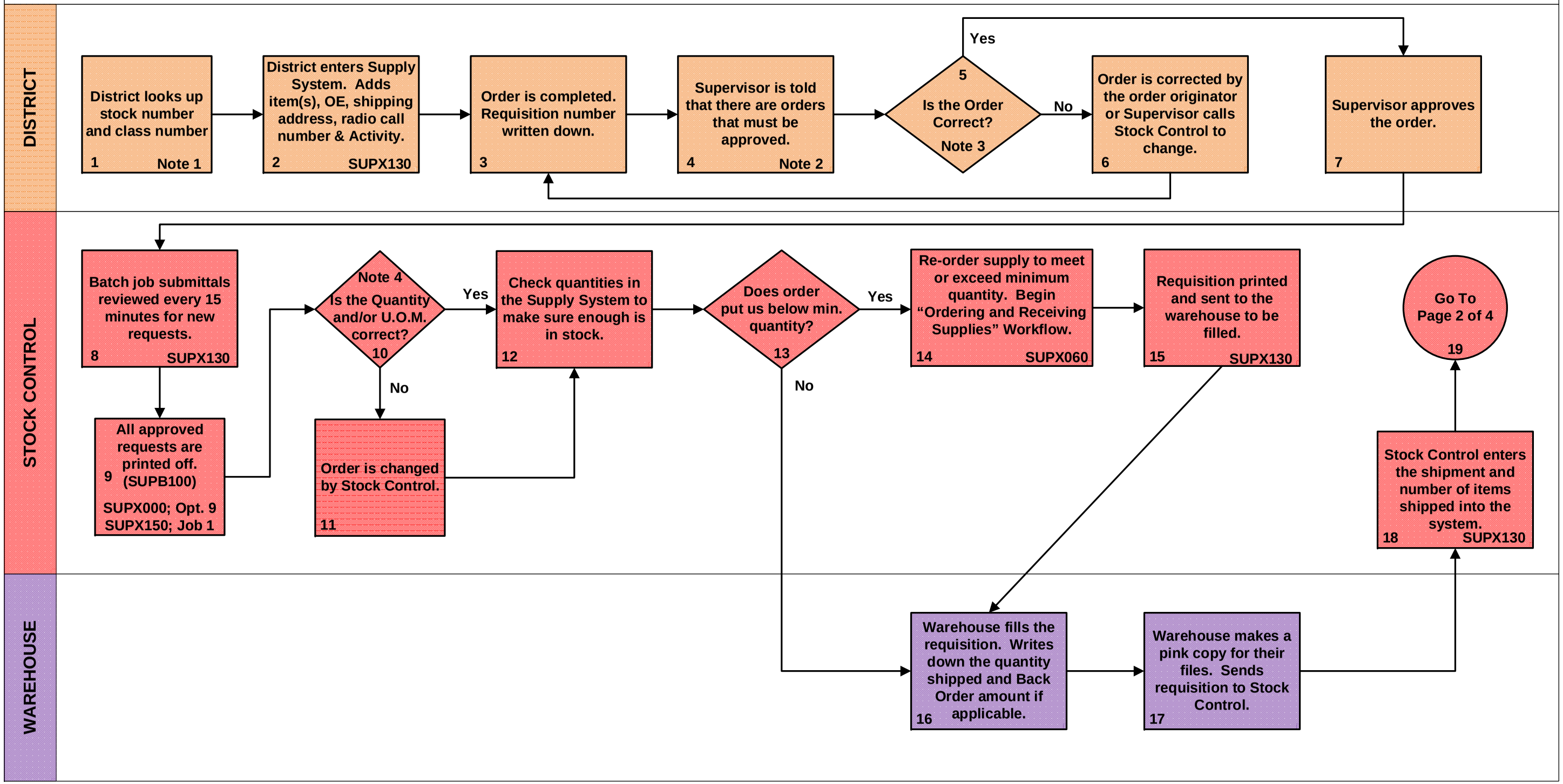
26) Credit given back to Districts and Divisions when they do returns and items are placed back in stock
    a. What if items are not placed back in stock?

27) Users have the ability to look at existing orders and mark as returning if needed
    a. Generate a return label for them
    b. Notify Stock Control about the return
    c. Credit is given at the purchase price
    d. Cities and Counties able to return items?

28) Notification sent to users that items must be returned within X days or the return will be cancelled

29) Ability to create on-demand reports
    a. Inventory value by class
    b. KP List Report for Controller Division
    c. Any item in stock by date, O.E., radio call number and stock number (or bar code)
    d. Sign orders and inventory
    e. History report on units of measure changes by item
    f. Daily and monthly adjustments
    g. History on items ordered individually or multiple items

Field Orders / Stock Orders – Page 1 of 4



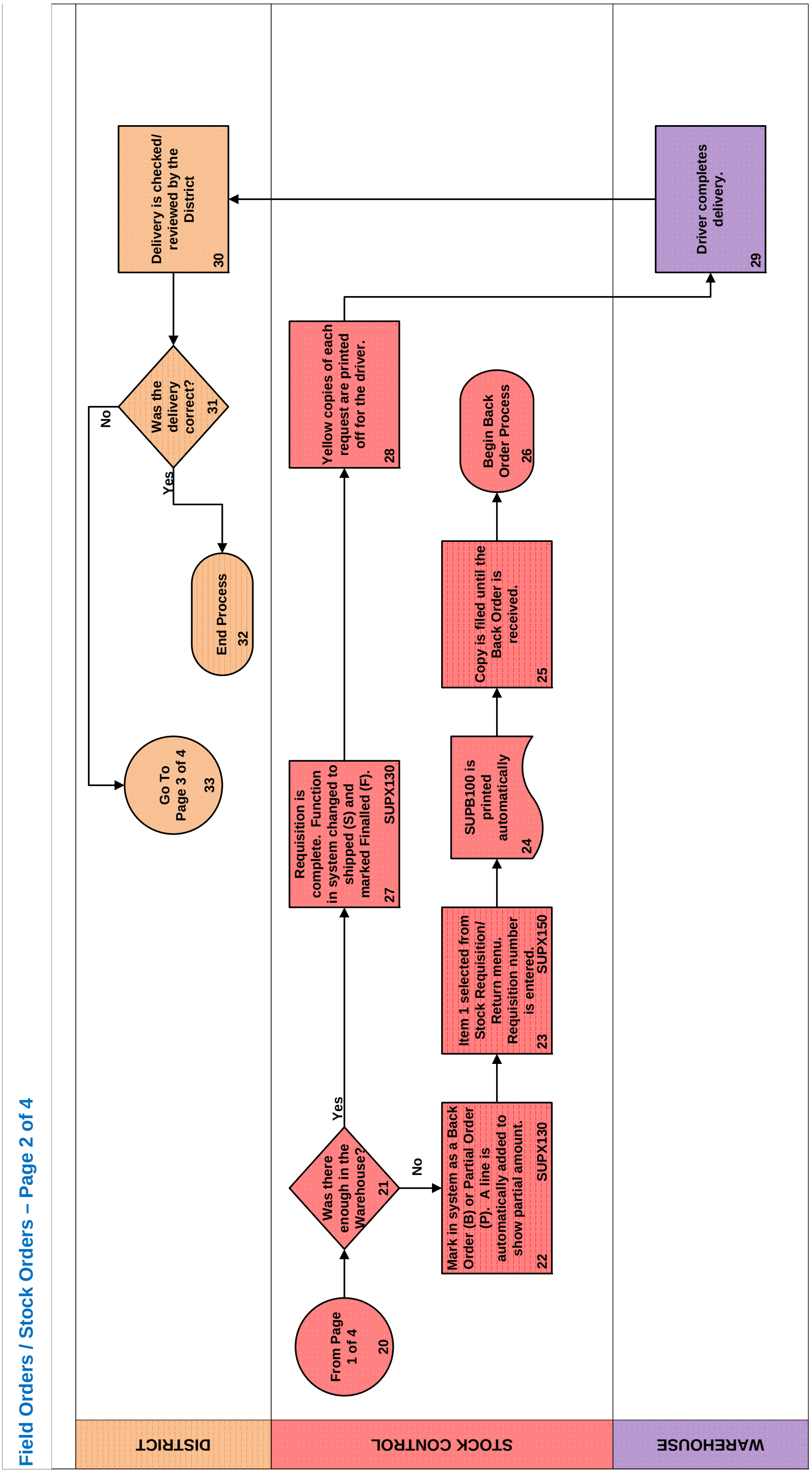
Note 1: They must search for the stock number in the system or utilize the stock photos located on the server which are grouped by class.

Note 2: Notification is done by direct contact or e-mail. If an order has not been approved within a week, Stock Control either calls or sends out e-mails.

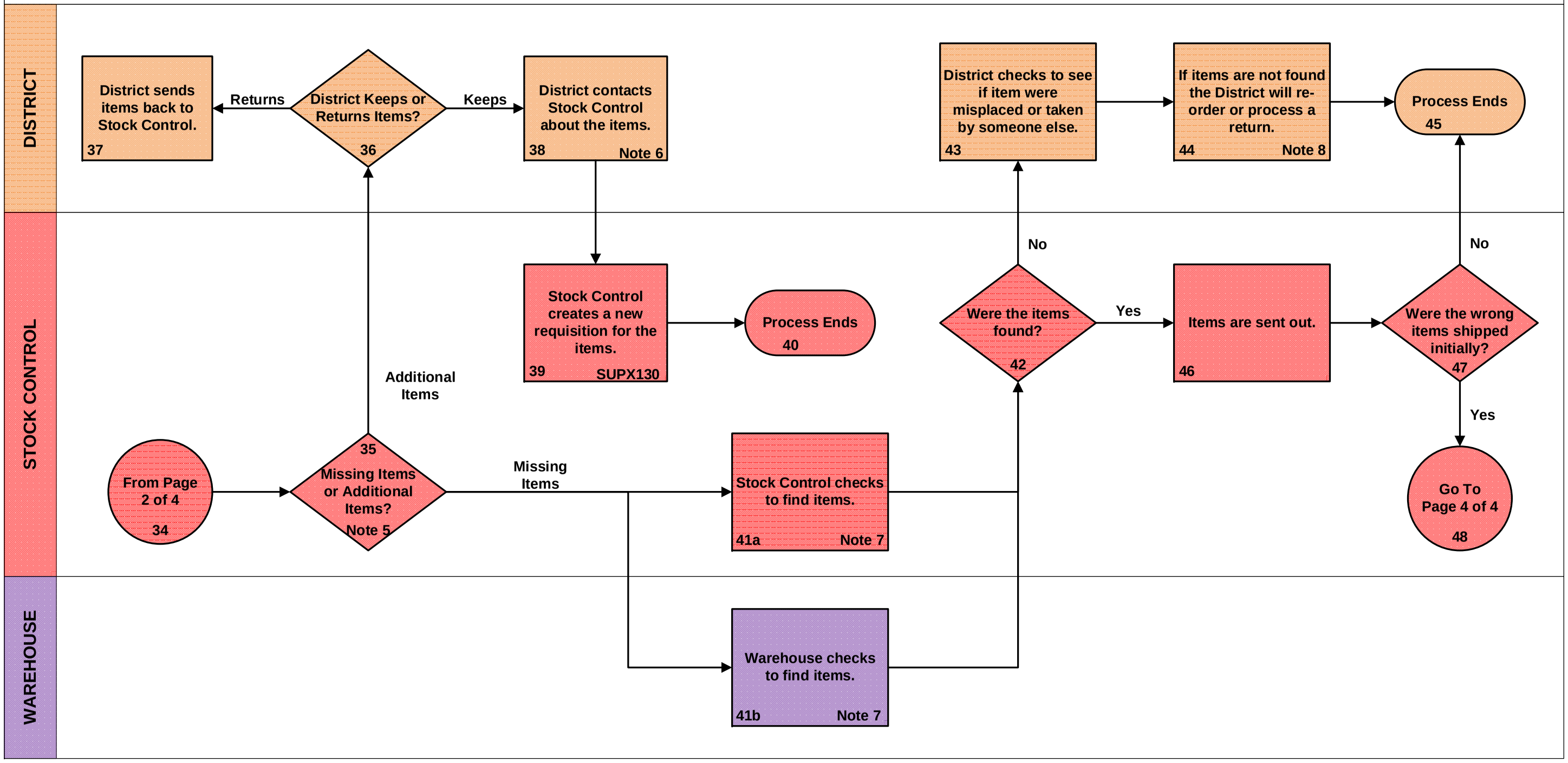
Note 3: Supervisor must exit from approval screen and look up the requisition to review before he can approve.

Note 4: Sometimes calls are made to double-check the amount; this could be one out of every ten.

APPENDIX C


Field Orders / Stock Orders – Page 2 of 4
DISTRICT
STOCK CONTROL
WAREHOUSE
From Page 1 of 4
20
Was there enough in the Warehouse?
21
No
Yes
Mark in system as a Back Order (B) or Partial Order (P). A line is automatically added to show partial amount.
SUPX130
22
Item 1 selected from Stock Requisition/ Return menu. Requisition number is entered.
SUPX150
23
SUPB100 is printed automatically
24
Copy is filed until the Back Order is received.
25
Begin Back Order Process
26
Requisition is complete. Function in system changed to shipped (S) and marked Finalled (F).
SUPX130
27
Yellow copies of each request are printed off for the driver.
28
Driver completes delivery.
29
Delivery is checked/ reviewed by the District
30
Was the delivery correct?
31
No
Yes
End Process
32
Go To Page 3 of 4
33

Field Orders / Stock Orders – Page 3 of 4



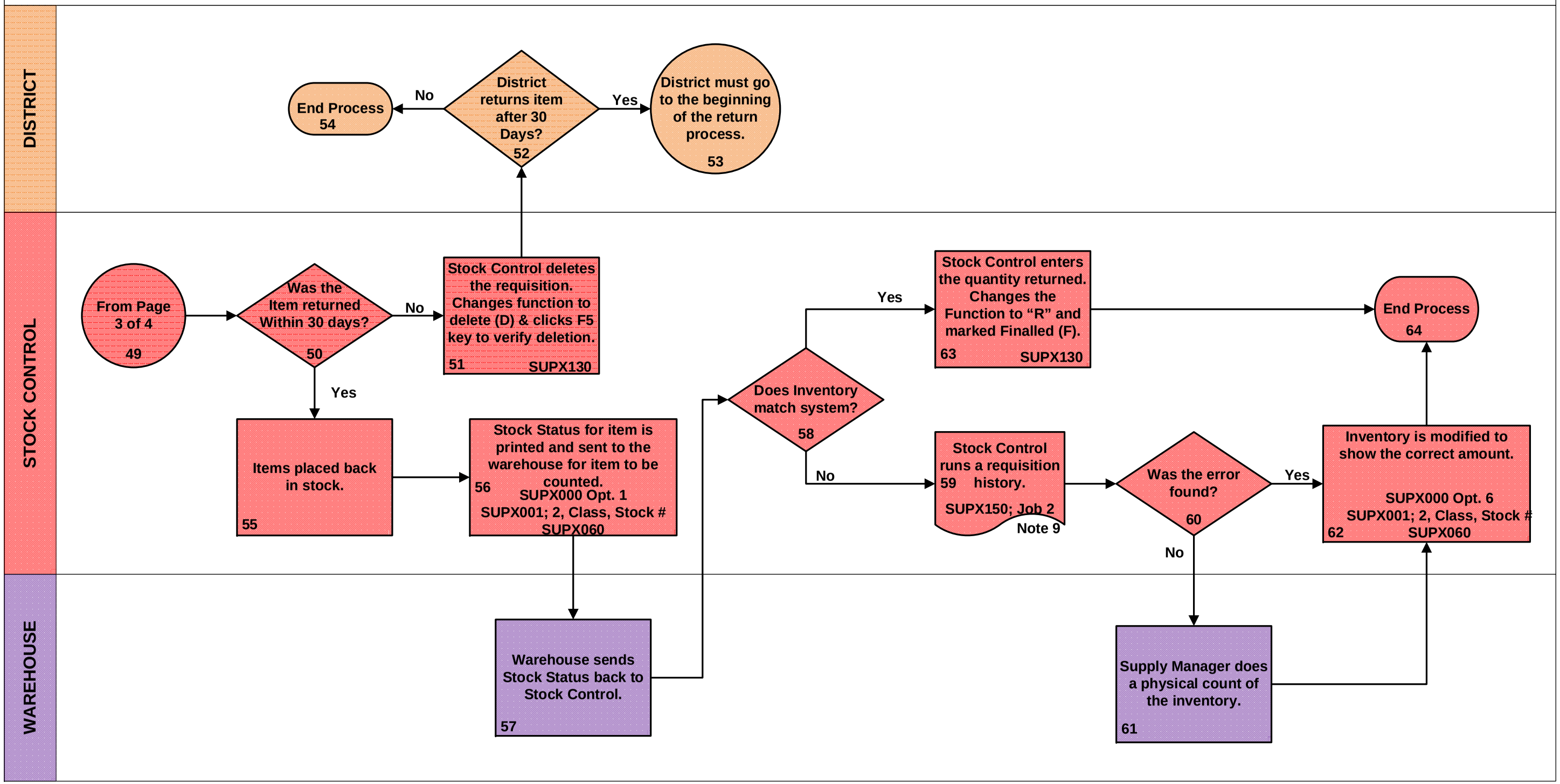
Note 5: Additional items is defined as items that were not ordered or more of an item was received than what was ordered.
Missing items is defined as items ordered were not received or less of an item was received than what was ordered.

Note 6: This rarely happens. Normally, the District keeps the items and Stock Control does not find out until they do an inventory and see a discrepancy.

Note 7: This would be a physical check of the Warehouse for the item; could be in the staging area, forgot to load it, dropped at the wrong spot or just plain gone.

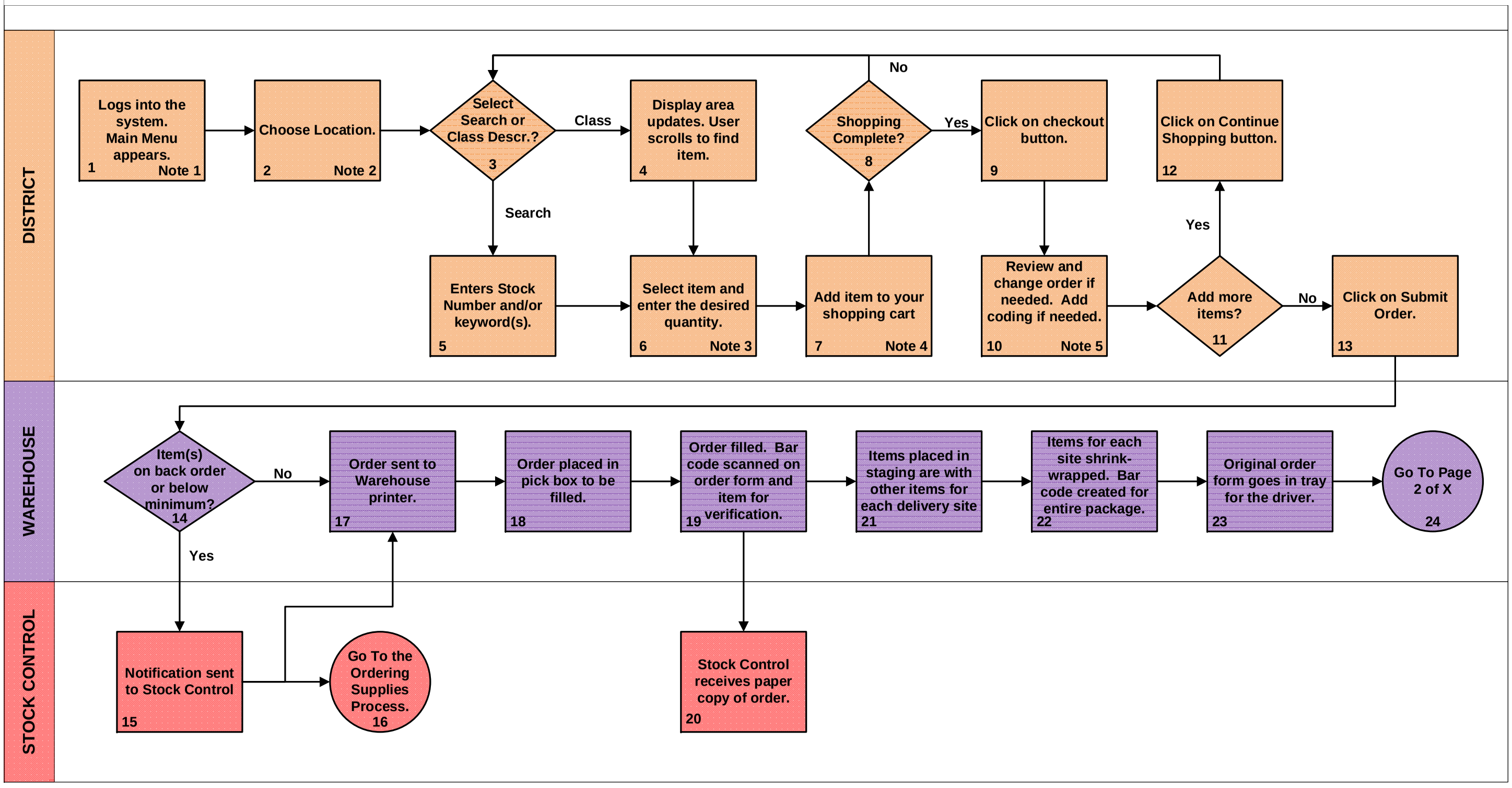
Note 8: If no one can find the item the District can process a new order and the existing order will be changed to a return.

Field Orders / Stock Orders – Page 4 of 4



Note 9: This is very hard to do and time consuming. They must enter estimated begin and end dates then go through all requisitions to find the item and see what was ordered.

Field Orders / Stock Orders – Page 1 of 3



Note 1: Need to distinguish between internal and external (Cities/Counties) users since some items may not be ordered by external users.

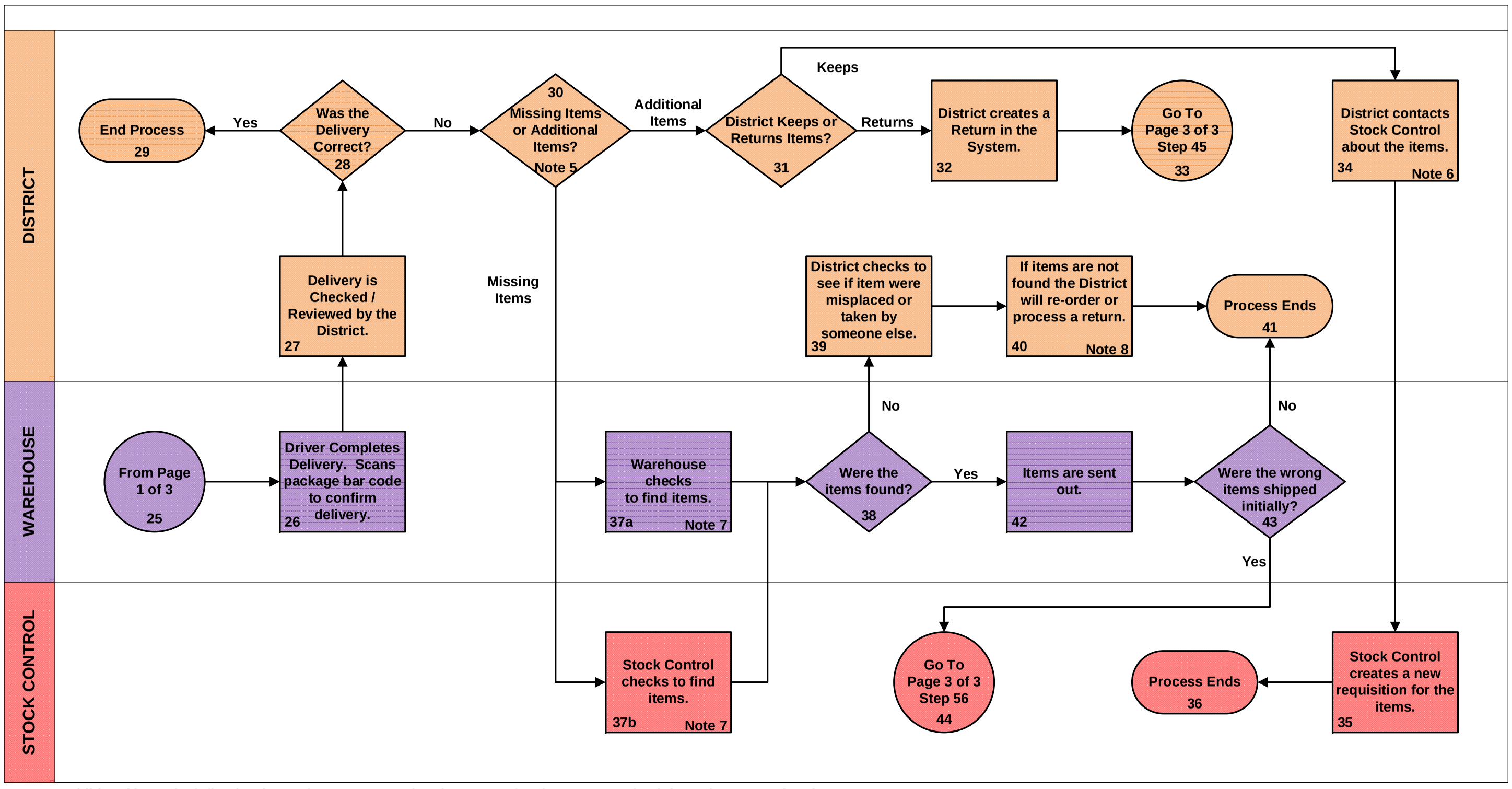
Note 2: Once logged in, this should display the available locations for delivery. Matrix showing users and their location needs to be developed. Some Maintenance Supervisors may have only one location.

Note 3: This needs to show how many items are available and if they are on back order as well. If they need more than what is available they can still order them but system must notify stock control of the back order so they can order more.

Note 4: When items are added to the shopping cart there should be an area on the screen that shows they have items in their cart and they can hover over it and see everything in their shopping cart.

Note 5: Here they would modify quantities or remove items. They would also add coding information such as Highway number, Begin Ref. Post and End Ref. Post. Ref. Post must be validated.

Field Orders / Stock Orders – Page 2 of 3



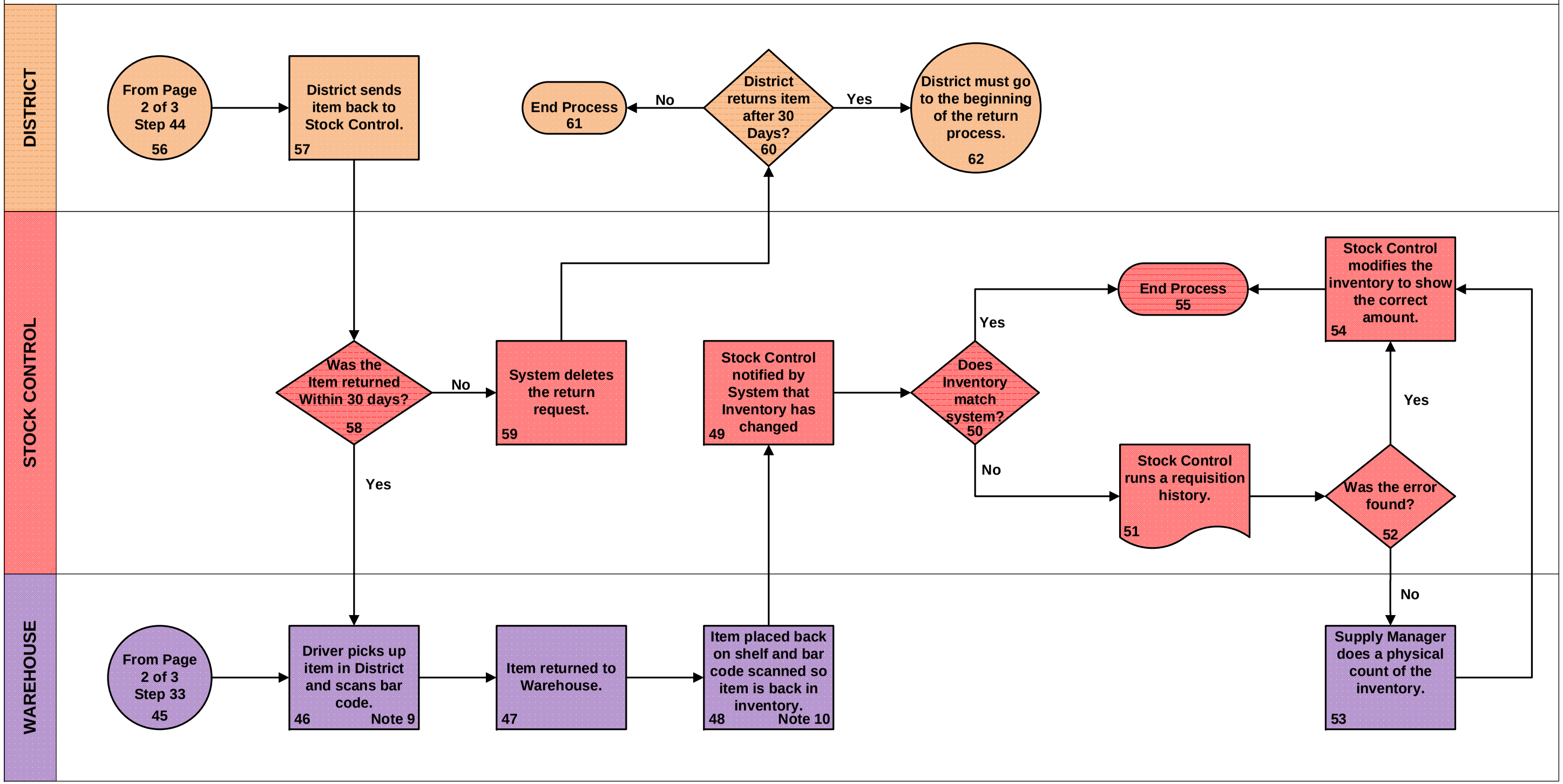
Note 5: Additional items is defined as items that were not ordered or more of an item was received than what was ordered.
Missing items is defined as items ordered were not received or less of an item was received than what was ordered.

Note 6: This rarely happens. Normally, the District keeps the items and Stock Control does not find out until they do an inventory and see a discrepancy.

Note 7: This would be a physical check of the Warehouse for the item; could be in the staging area, forgot to load it, dropped at the wrong spot or just plain gone.

Note 8: If no one can find the item the District can process a new order and the existing order will be changed to a return.

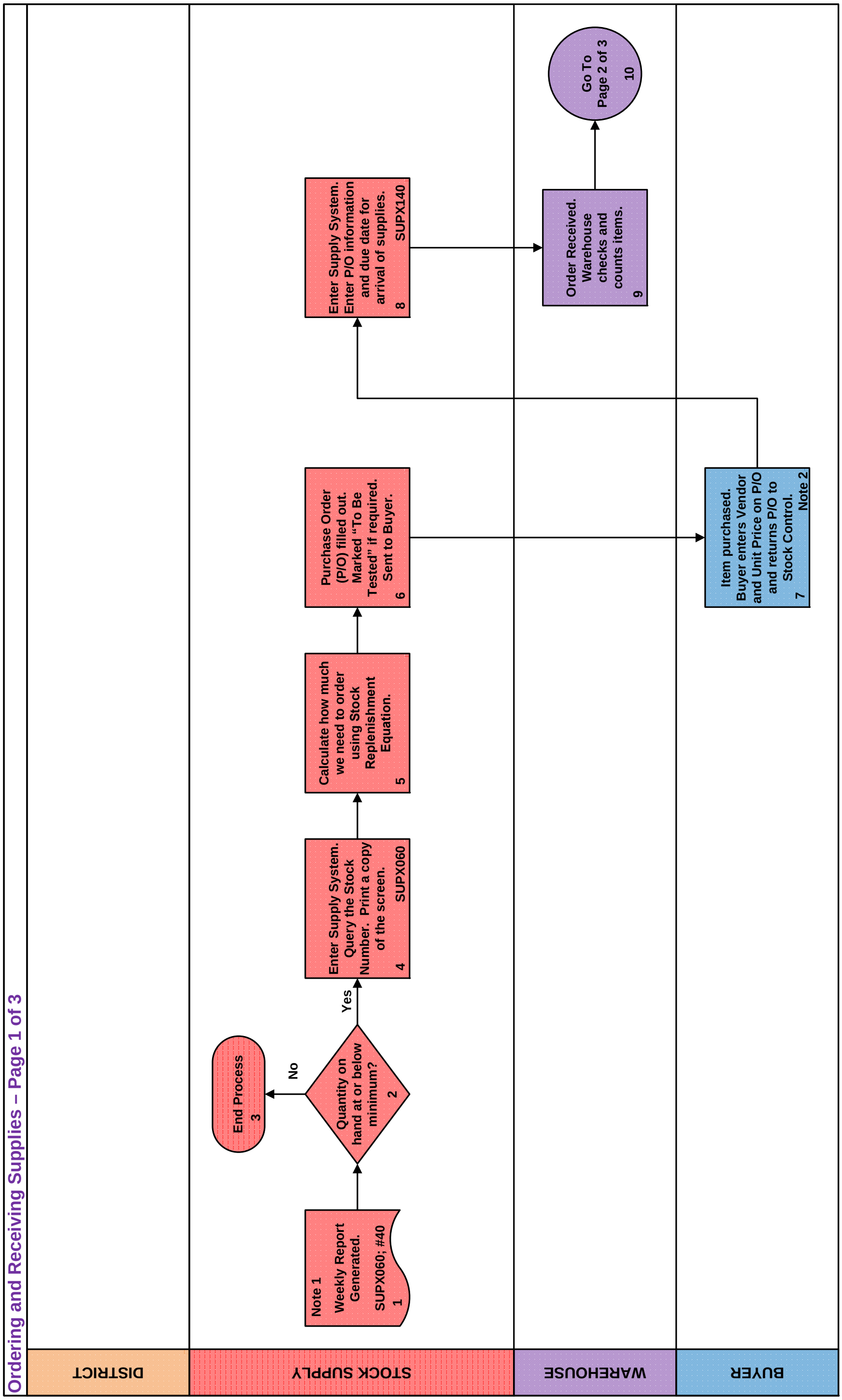
Field Orders / Stock Orders – Page 3 of 3



Note 9: When the bar code is scanned, this should stop the timer for the 30 day period that is allowed for returns.

Note 10: When bar code is scanned, this should adjust the inventory and send notification to Stock Control about the change.

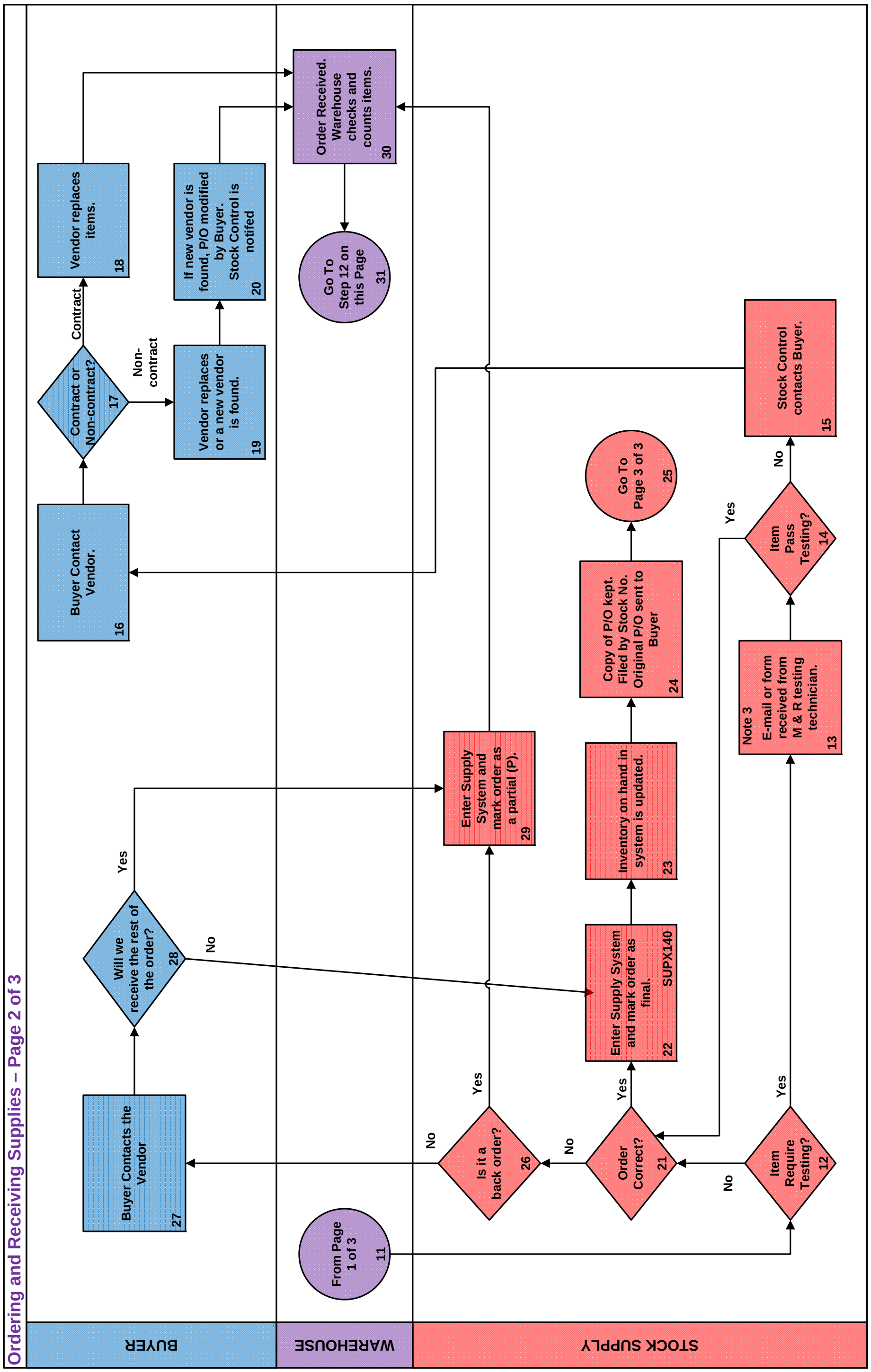
APPENDIX E



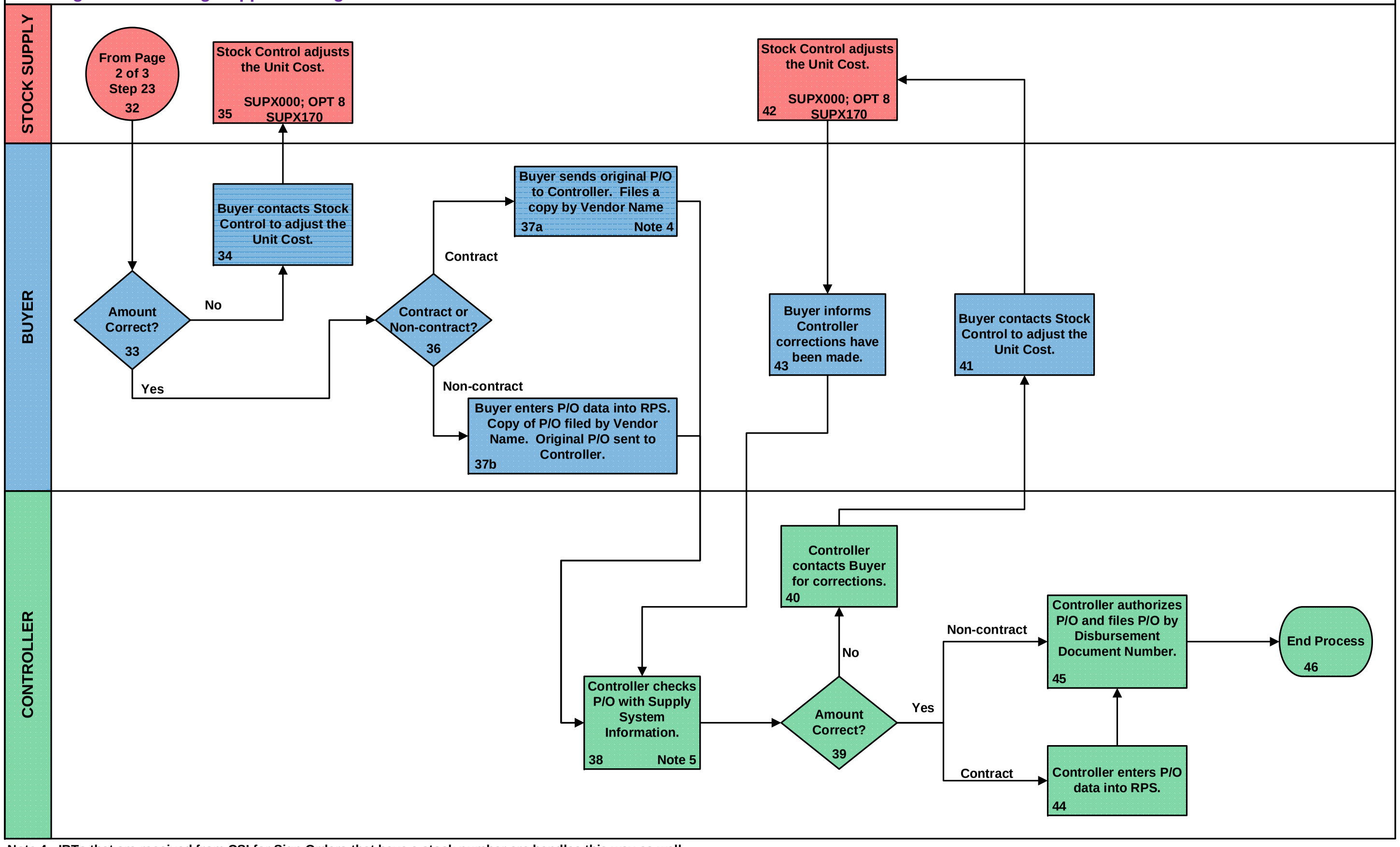
Note 1: This report can only be printed on Monday because it updates tables in the system when it is run.

Note 2: For Sign Orders that have a stock number, the Buyer receives the IBT from CSI and sends to Controller Division.

APPENDIX E


Ordering and Receiving Supplies – Page 2 of 3
BUYER
WAREHOUSE
STOCK SUPPLY
From Page 1 of 3 11
Buyer Contacts the Vendor 27
Will we receive the rest of the order? 28
Yes
No
Buyer Contact Vendor. 16
Contract or Non-contract? 17
Contract
Non-contract
Vendor replaces items. 18
Vendor replaces or a new vendor is found. 19
If new vendor is found, P/O modified by Buyer. Stock Control is notifed 20
Order Received. Warehouse checks and counts items. 30
Go To Step 12 on this Page 31
Enter Supply System and mark order as a partial (P). 29
Is it a back order? 26
Yes
No
Inventory on hand in system is updated. 23
Copy of P/O kept. Filed by Stock No. Original P/O sent to Buyer 24
Go To Page 3 of 3 25
Enter Supply System and mark order as final. SUPX140 22
Order Correct? 21
Yes
No
Stock Control contacts Buyer. 15
Item Pass Testing? 14
Yes
No
Note 3 E-mail or form received from M & R testing technician. 13
Item Require Testing? 12
Yes
No
Note 3: Various units in M&R perform the testing depending on the item that is ordered. Some send an e-mail and others send a form to denote if the item does or does not pass.

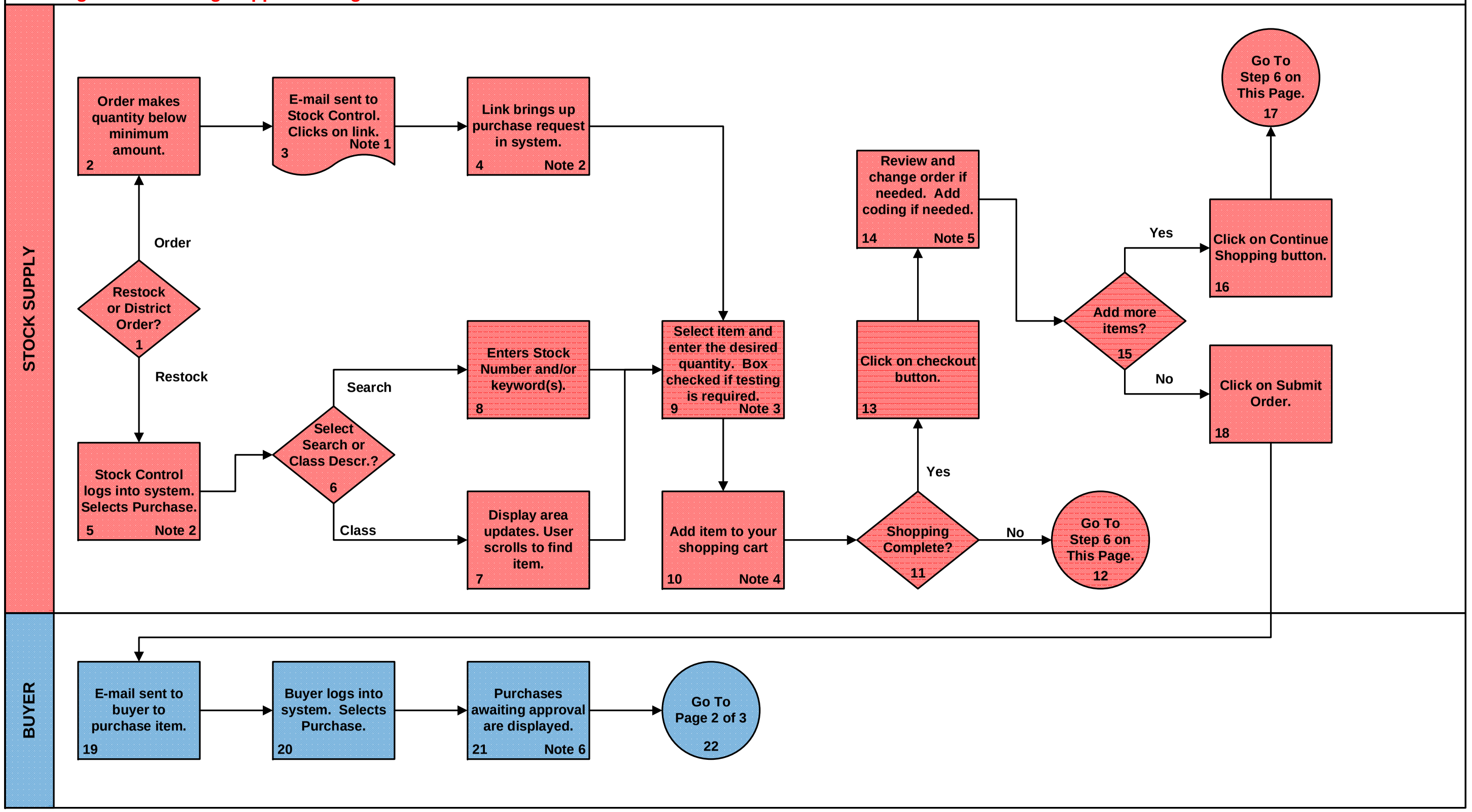
Ordering and Receiving Supplies – Page 3 of 3



Note 4: IBTs that are received from CSI for Sign Orders that have a stock number are handles this way as well.

Note 5: This is done by checking what is entered on the Purchase Order with what is entered into the Supply System, RPS and E1 or NIS.

Ordering and Receiving Supplies – Page 1 of 3



Note 1: E-mail should state quantity on hand, minimum quantity and maximum quantity allowed for the item.

Note 2: Stock Control sets maximum and minimum limits on the amount of each stock item.

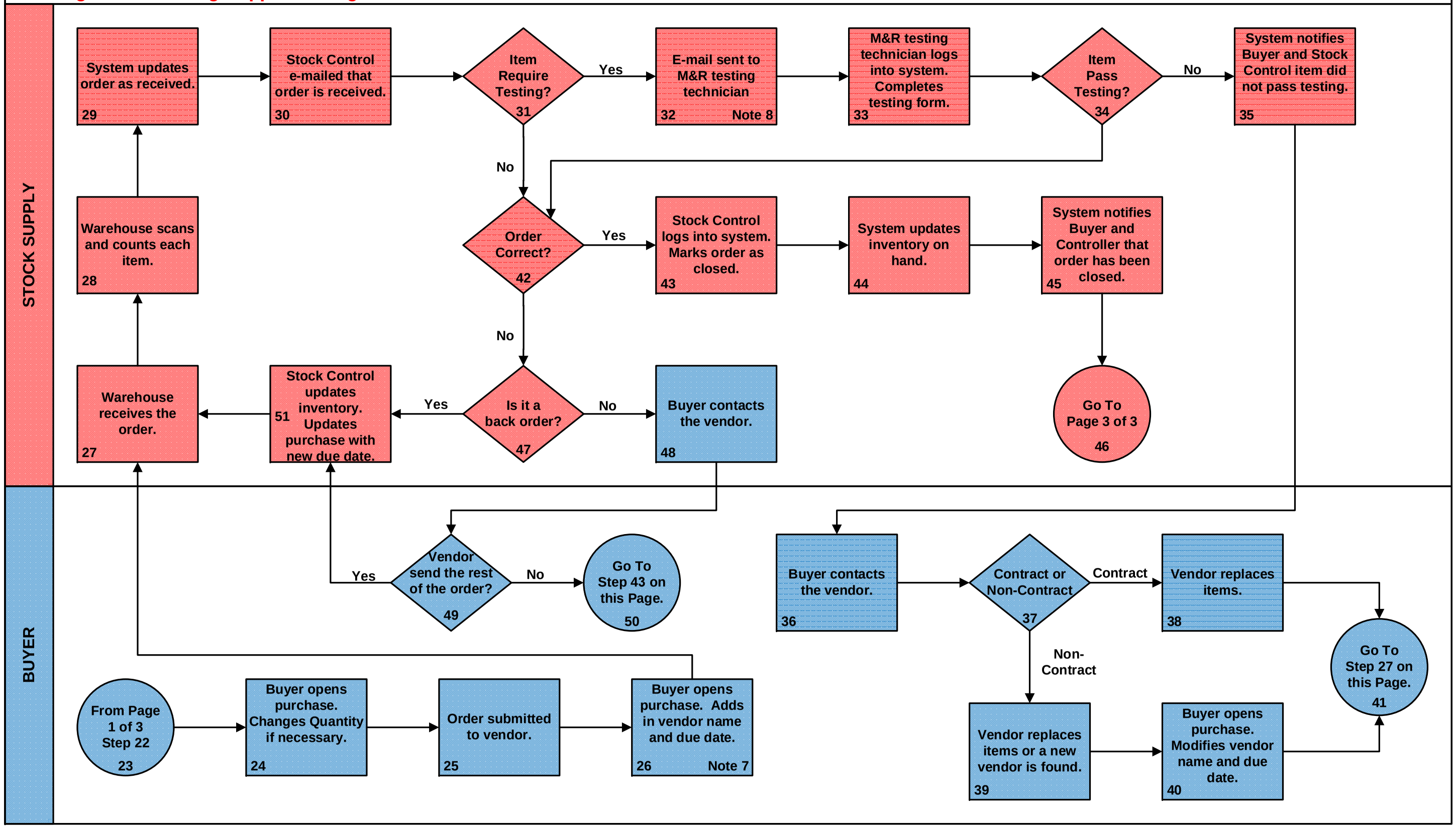
Note 3: This needs to show how many items are available and if they are on back order as well.

Note 4: When items are added to the shopping cart there should be an area on the screen that shows they have items in their cart and they can hover over it and see everything in their shopping cart.

Note 5: Here they would modify quantities or remove items. They would also add coding information such as Highway number, Begin Ref. Post and End Ref. Post. Ref. Post must be validated.

Note 6: If purchase has not been approved by the Buyer within 7 days then Stock Control must be notified.

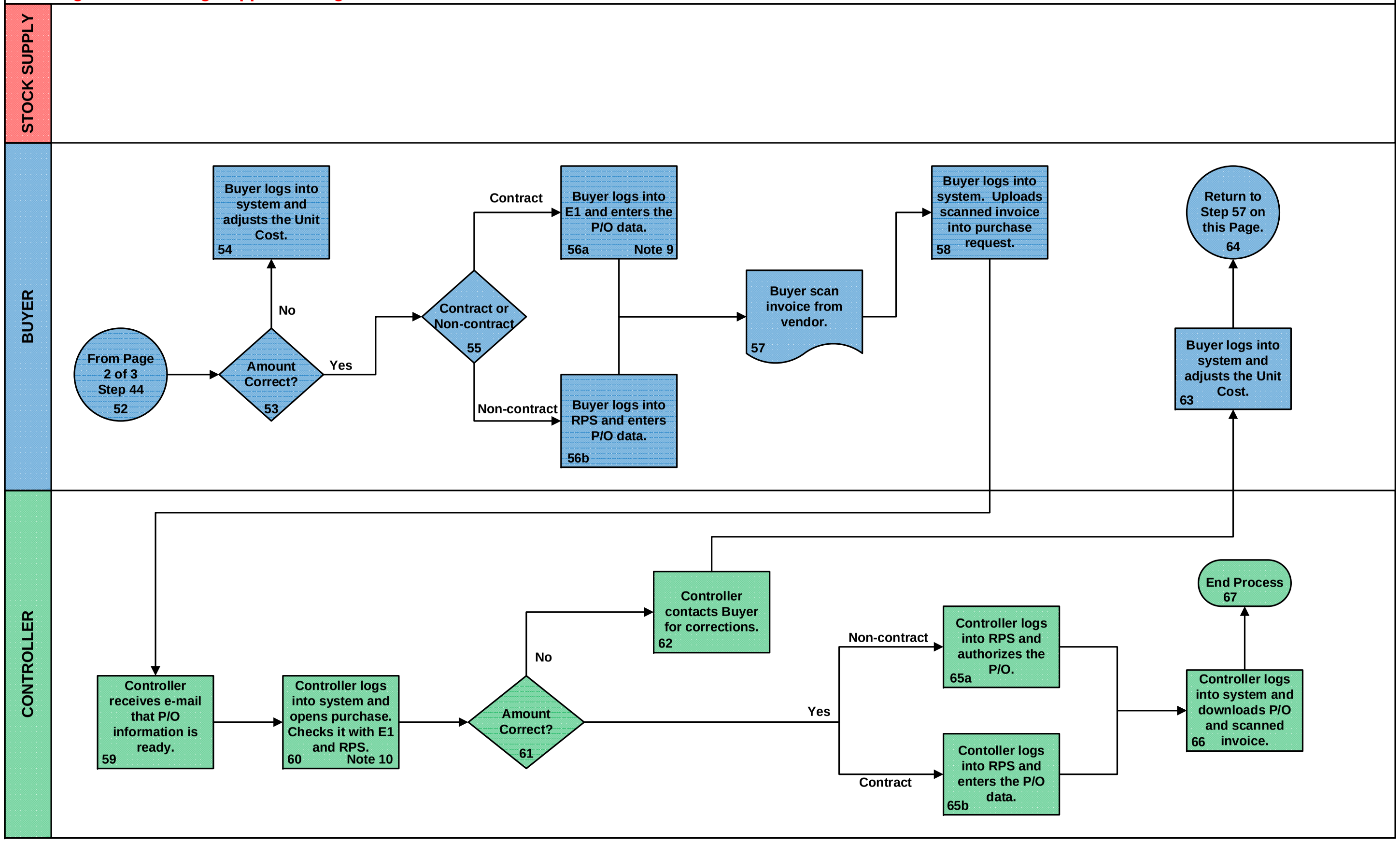
Ordering and Receiving Supplies – Page 2 of 3



Note 7: A report will need to be developed that will show the due date for all purchases and change color; one color for past due and another color for back orders. The report should include the Item(s), Vendor Name, Quantity and NDOR P/O number.

Note 8: Technician who receives the e-mail depends on what item will be tested. Each item tested needs to have the technician stored as part of the metadata.

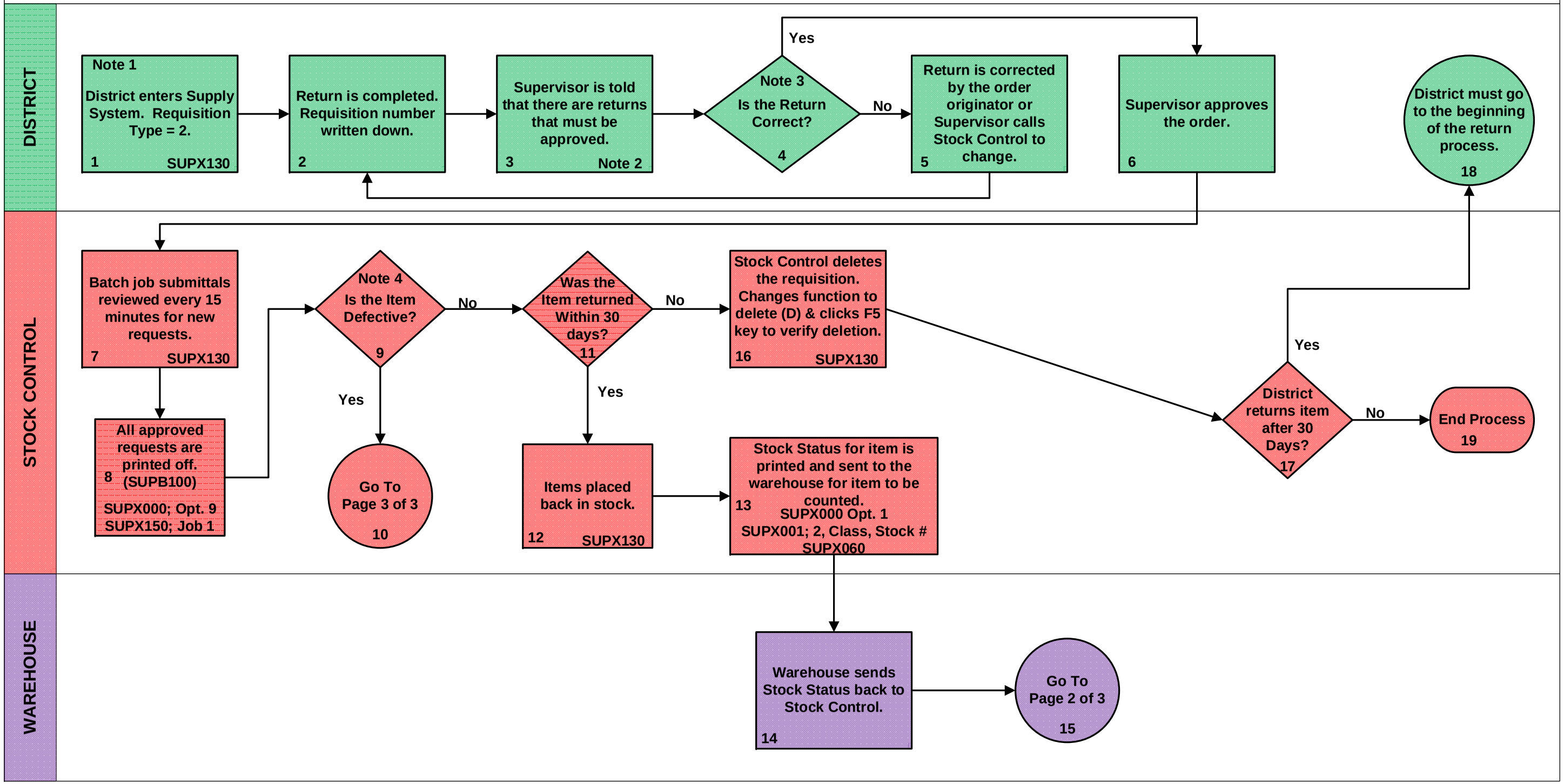
Ordering and Receiving Supplies – Page 3 of 3



Note 9: IBTs that are received from CSI for Sign Orders that have a stock number are handled this way as well.

Note 10: Controller views the P/O data and the scanned invoice along with what has been entered into E1 and RPS. Possible to view E1 and RPS data in the system without having to open those apps separately?

Returning Inventory – Page 1 of 3



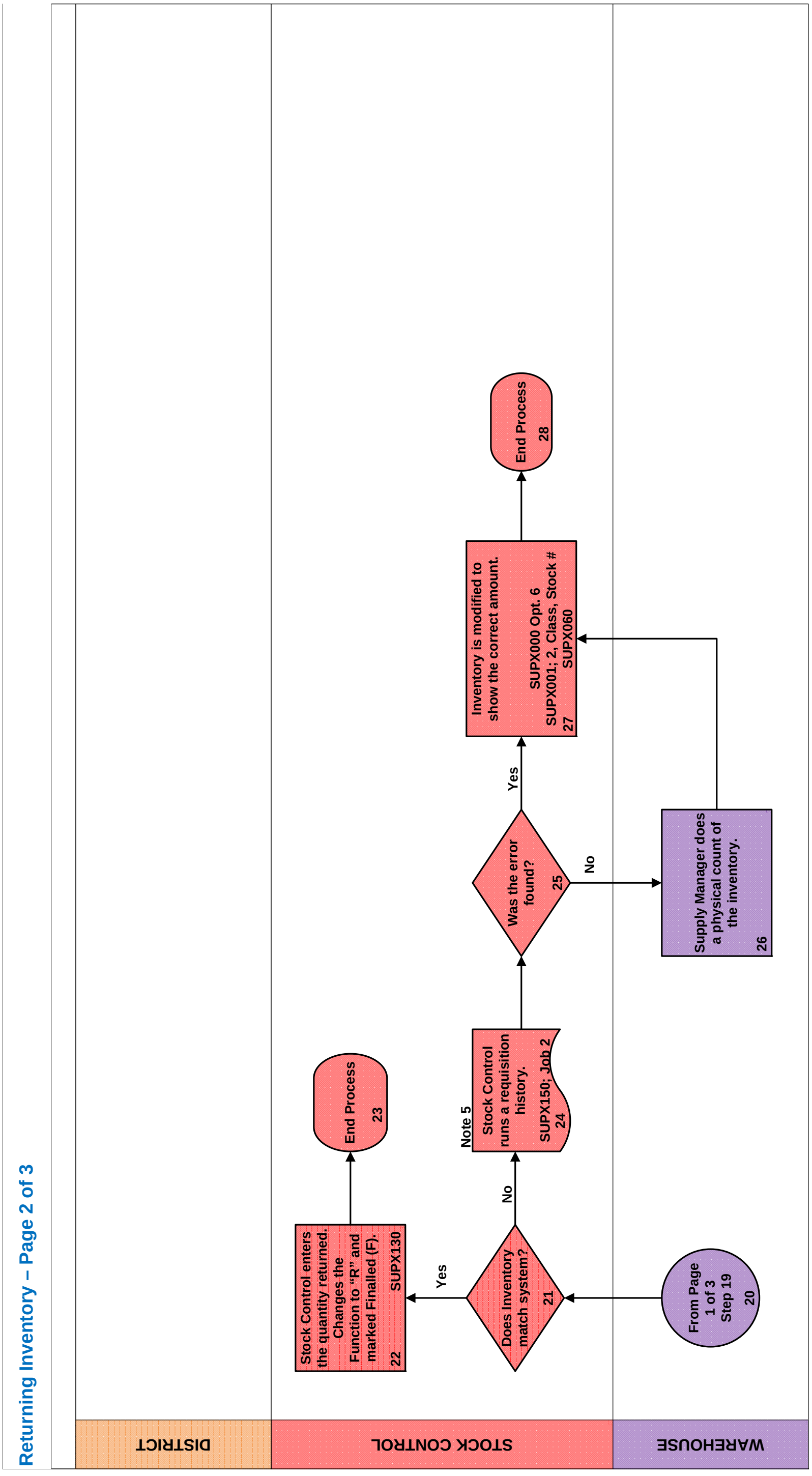
Note 1: This could be a return or the correction of a mis-entry. This could be done by Stock Control, a District or a Division.

Note 2: Notification is done by direct contact or e-mail. If return has not been approved within a week Stock Control will e-mail or call someone.

Note 3: Supervisor must exit from approval screen and look up the requisition to review before he can approve.

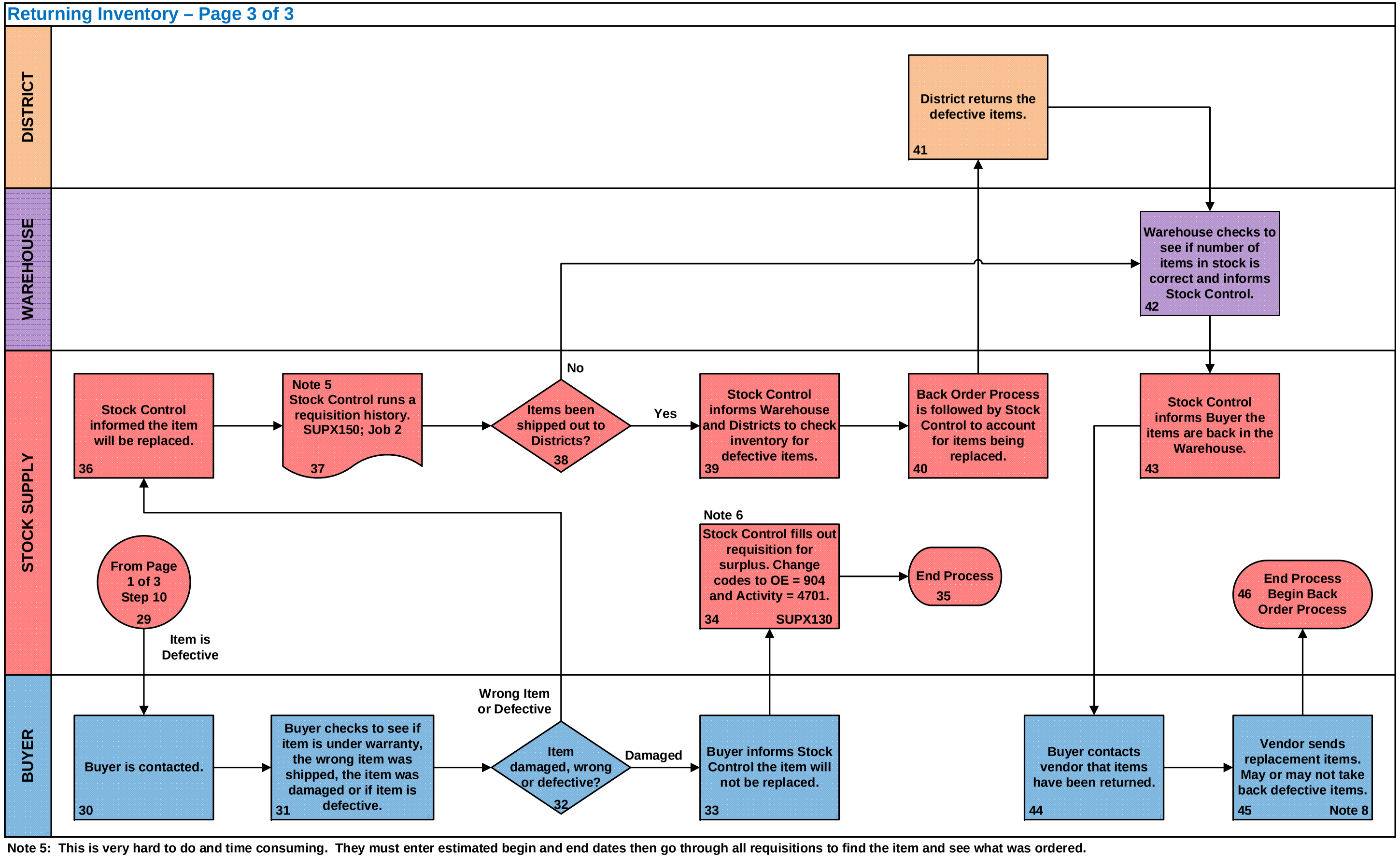
Note 4: This could mean the item is damaged, defective or the wrong item was shipped. This is difficult to determine. Calls must be made to determine or they put a comment in the "Shipped to/Received from" box on Screen SUPX130.

APPENDIX G



Note 5: This is very hard to do and time consuming. They must enter estimated begin and end dates then go through all requisitions to find the item and see what was ordered.

Returning Inventory – Page 3 of 3



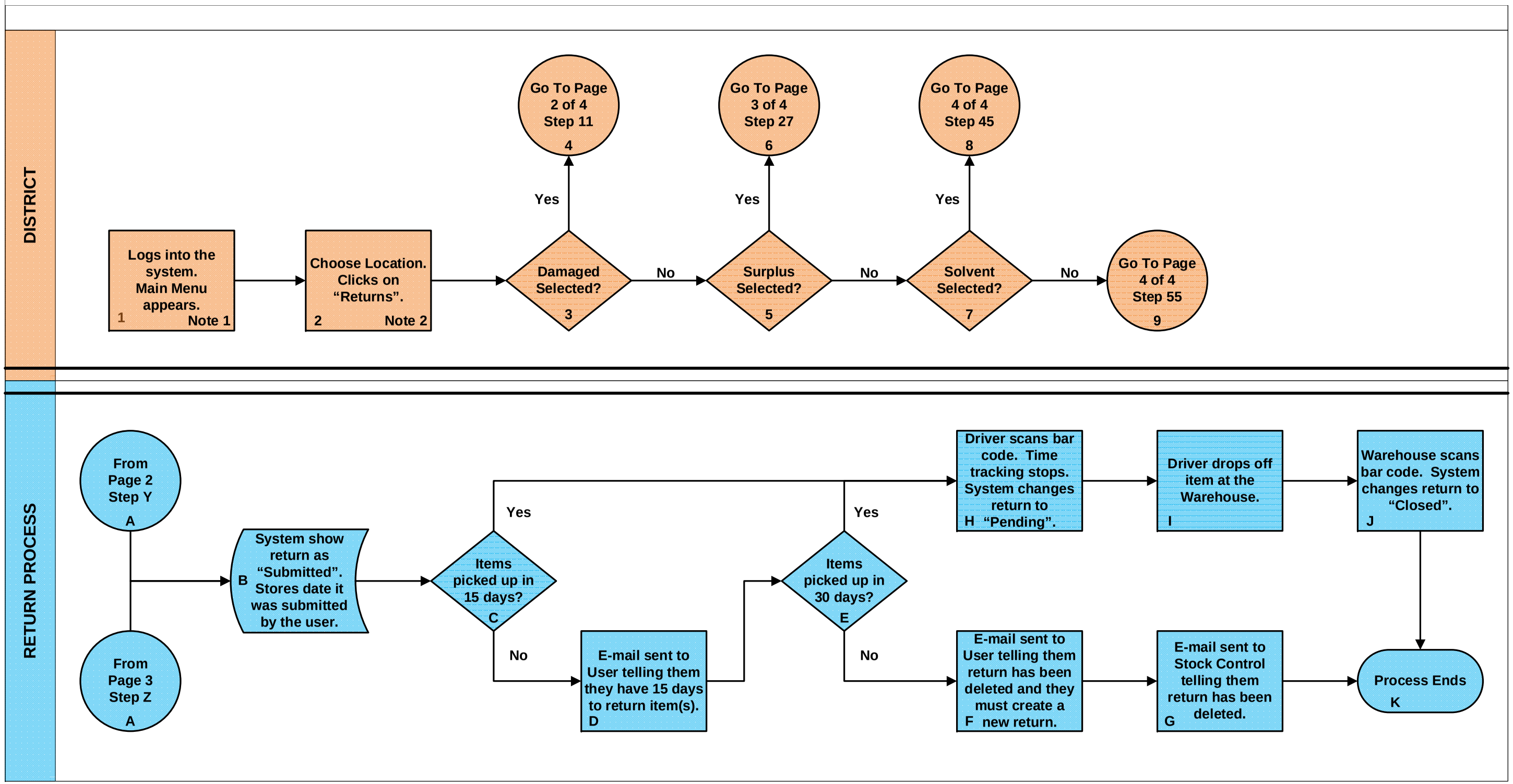
Note 5: This is very hard to do and time consuming. They must enter estimated begin and end dates then go through all requisitions to find the item and see what was ordered.

Note 6: As stated in Note 4, there is no area for comments on Screen SUPX130 so they are put into the "Shipped to/Received from" box.

Note 7: This could also be done by the Districts as a return requisition and then creating a new field order/stock order requisition.

Note 8: If the vendor does not take the items they are thrown away and nothing is done to the system since the net change in inventory will be zero.

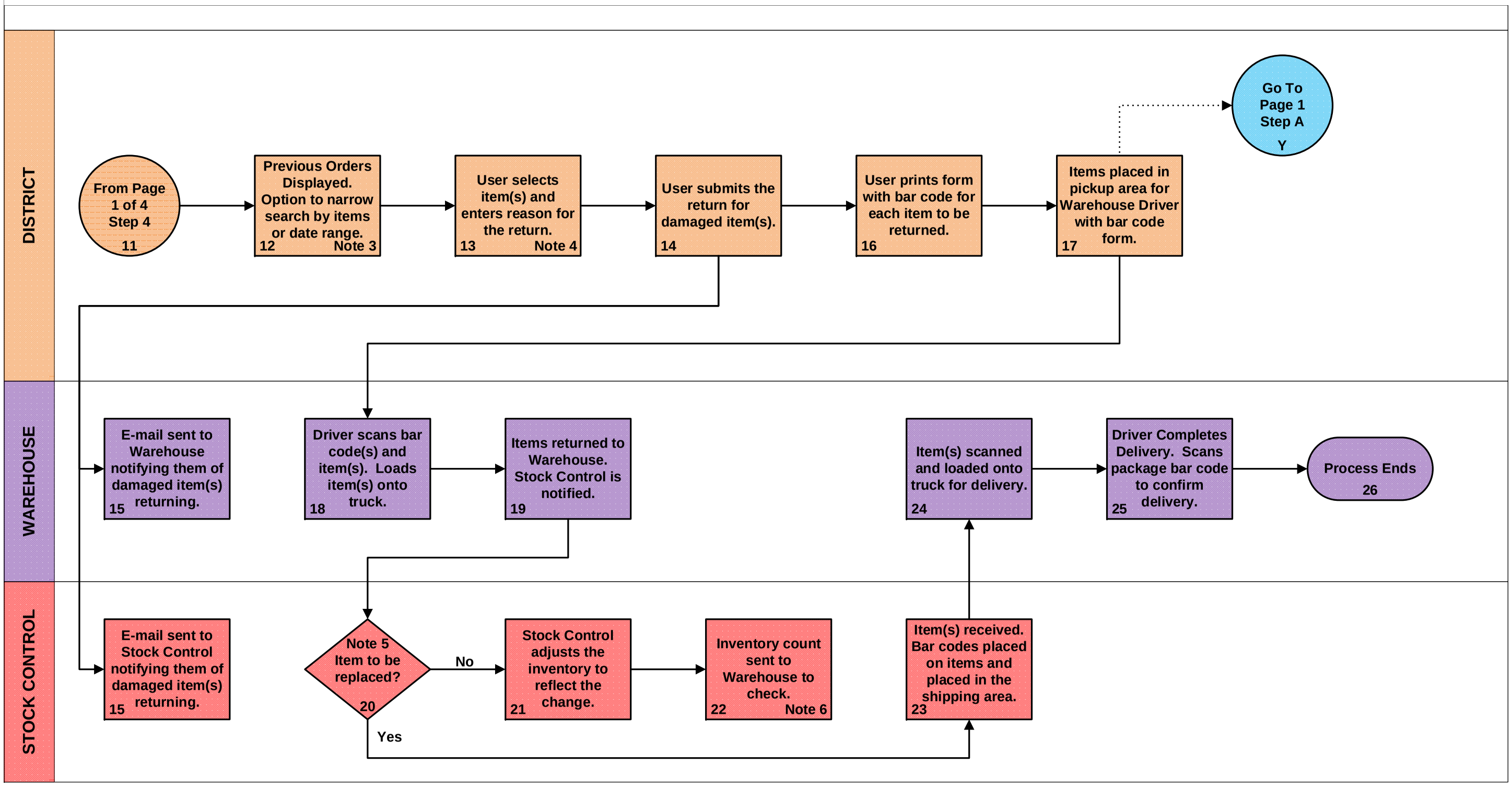
Returns – Page 1 of 4



Note 1: Need to distinguish between internal and external (Cities/Counties) users since some items may not be ordered by external users.

Note 2: Once logged in, this should display the available locations for delivery. Matrix showing users and their location needs to be developed. Some Maintenance Supervisors may have only one location.

Returns – Page 2 of 4



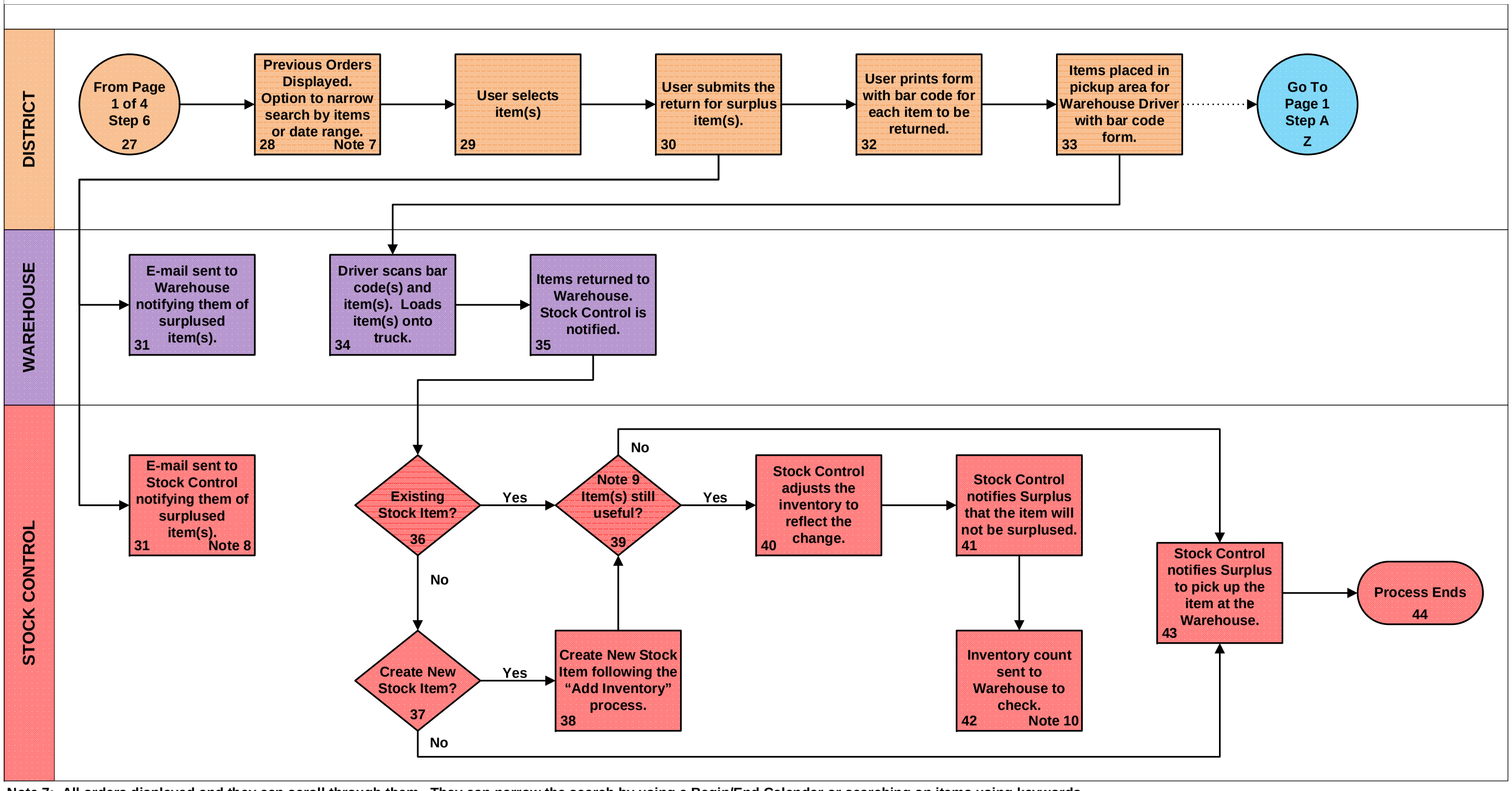
Note 3: All orders displayed and they can scroll through them. They can narrow the search by using a Begin/End Calendar or searching on items using keywords. Retention period for orders will be three years.

Note 4: When the user selects an item and enters the number to return, they need a box where they can enter the reason for the return.

Note 5: This could be that the item(s) was under warranty or was defective. Buyer will work with the vendor to obtain the replacement items.

Note 6: Warehouse will do a physical inventory to see if the database matches the number of items in stock. If not, they will inform Stock Control who will make the update to the inventory.

Returns – Page 3 of 4



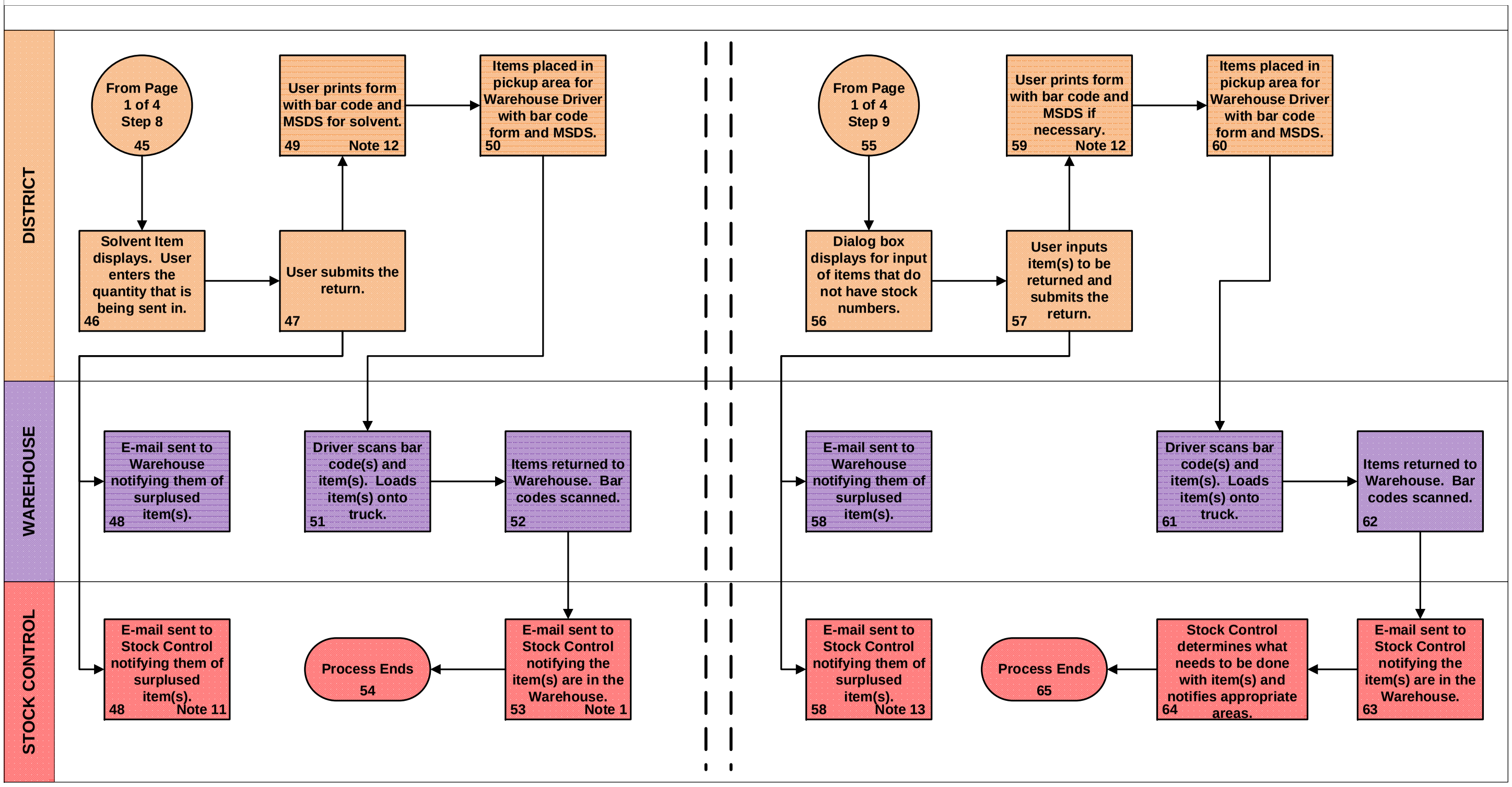
Note 7: All orders displayed and they can scroll through them. They can narrow the search by using a Begin/End Calendar or searching on items using keywords.

Note 8: E-mail also sent to Surplus Manager so they are aware items will be received.

Note 9: Stock Control will check to see if the item can be placed back in inventory before it is sent to surplus.

Note 10: Warehouse will do a physical inventory to see if the database matches the number of items in stock. If not, they will inform Stock Control who will make the update to the inventory.

Returns – Page 4 of 4

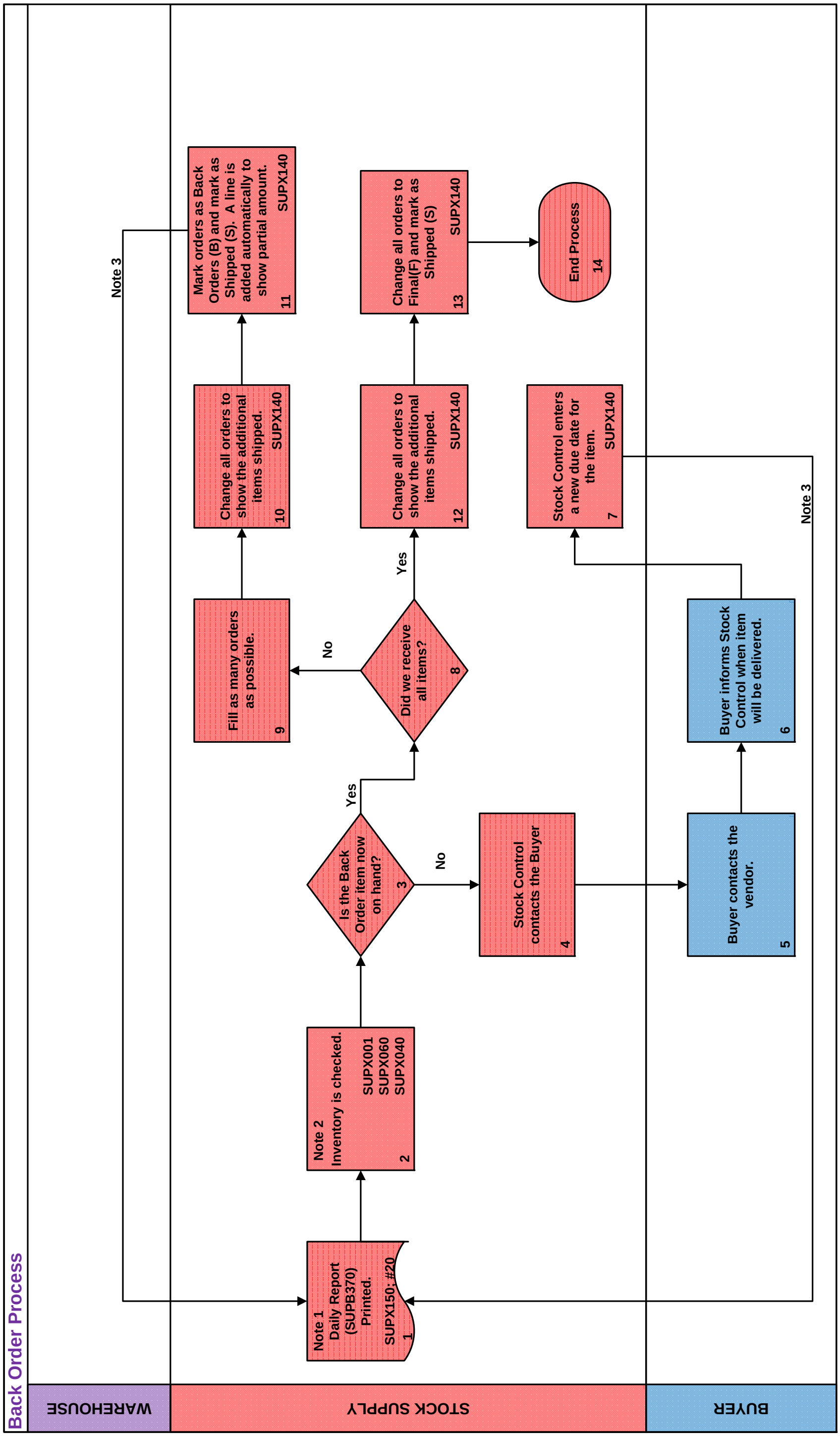


Note 11: E-mail also sent to Operations Maintenance Engineer and Operations Highway Biologist.

Note 12: MSDS stands for Material Safety Data Sheet. It must accompany any hazardous material that is transported in case of an accidental spill.

Note 13: Depending on what is being returned, Stock Control may notify others as well.

APPENDIX I

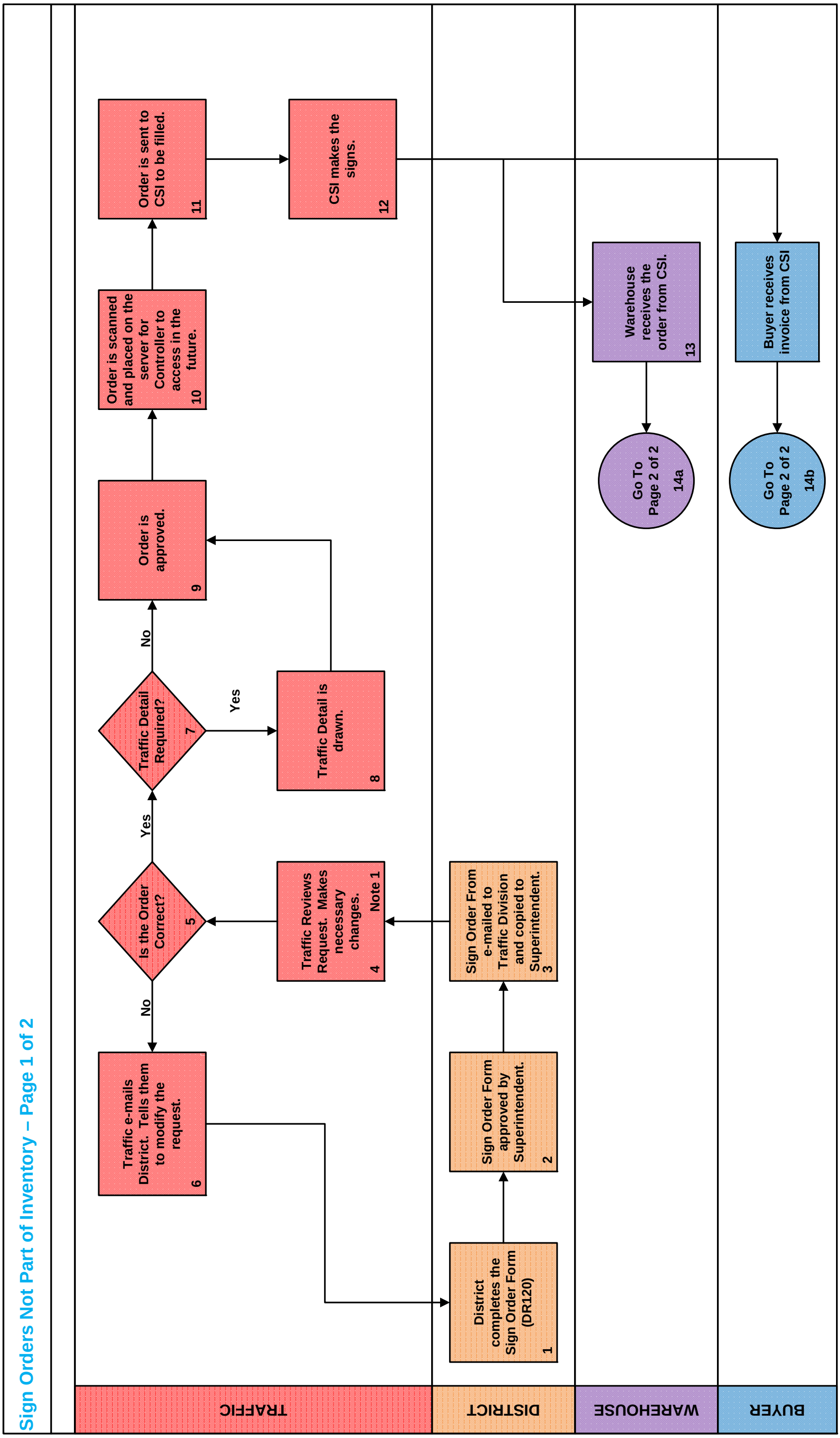


Note 1: Before printing this report, they must enter the same date in two places.

Note 2: Only one line is shown for each existing P/O so it doesn't show everything on the P/O

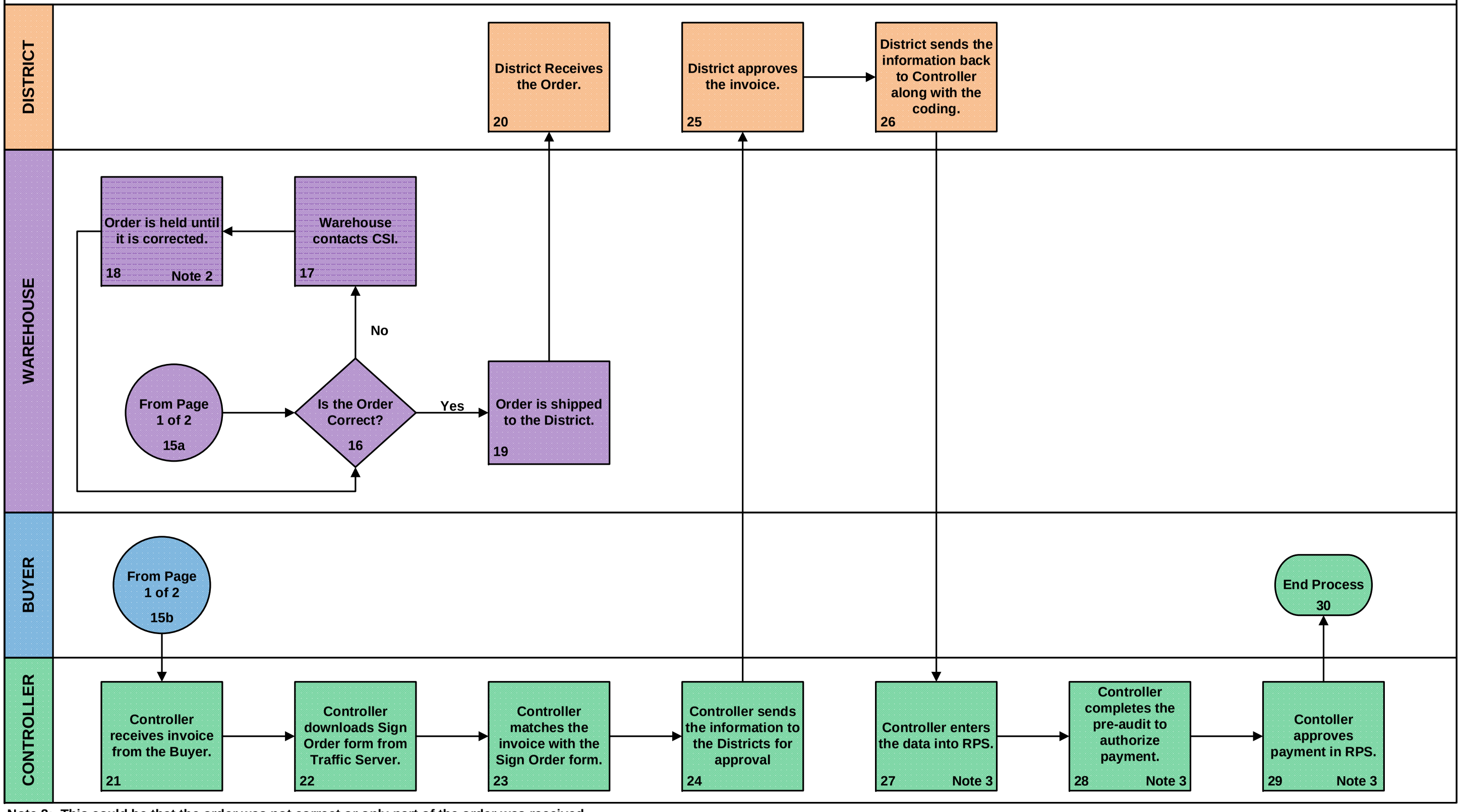
Note 3: Since the Daily Report can only be run once a day, the changes made in steps 7 and 11 will not be seen in the daily report until the next day.

APPENDIX J



Note 1: Traffic will adjust the order for a number of reasons such as size or color.

Sign Orders Not Part of Inventory – Page 2 of 2



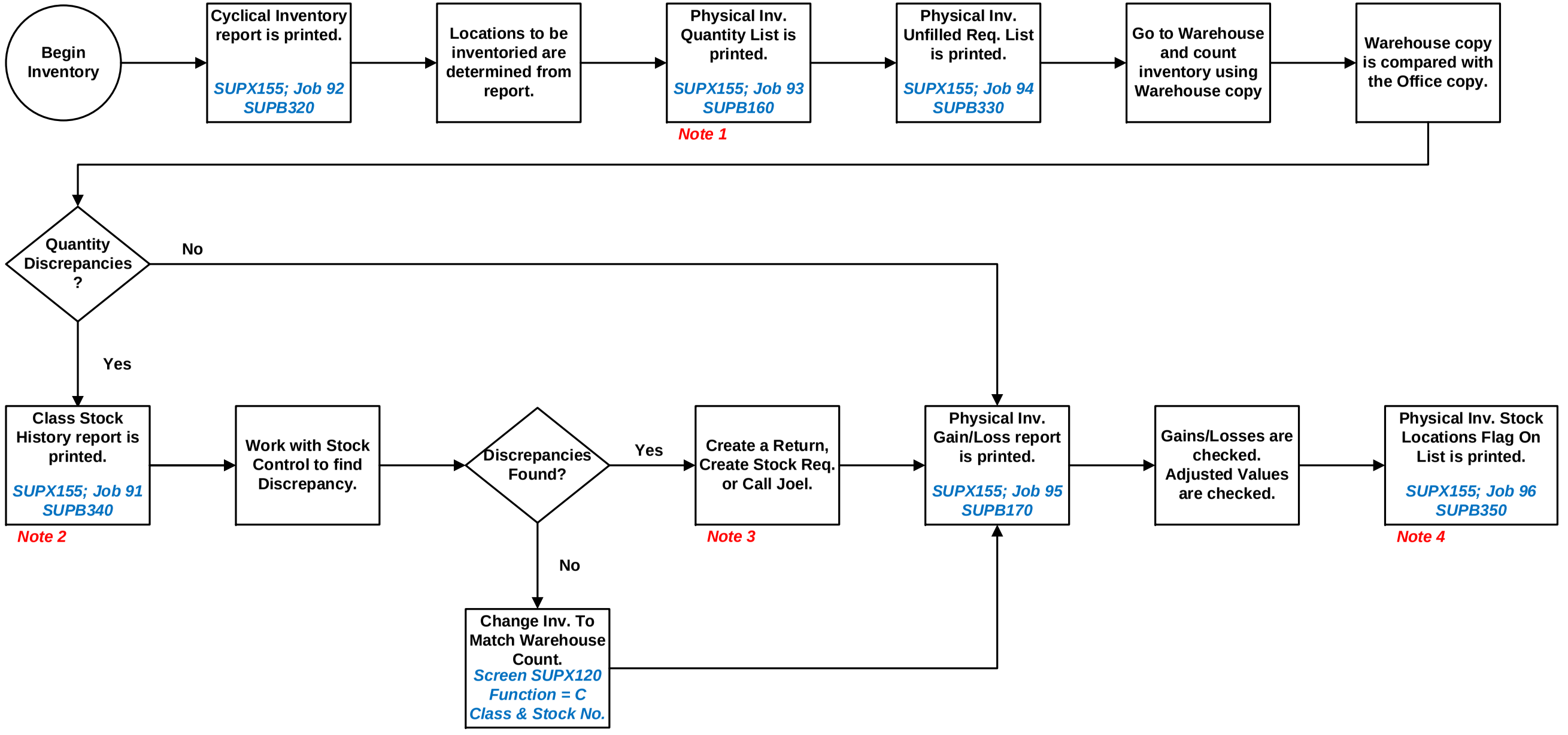
Note 2: This could be that the order was not correct or only part of the order was received.

Note 3: Steps 27, 28 and 29 cannot be done by the same person. One person may do step 27 but another must do steps 28 and 29 for auditing purposes.

APPENDIX K

```
SUPX110                    SUPPLY INVENTORY SYSTEM                  06/05/13
                         INVENTORY MASTER      QUERY                15:50:44


FUNCTION: Q QUERY


CLASS/STOCK NUMBER: 85 - 43200


KEY WORD................. REFLECTOR
ITEM DESCRIPTION......... DELINEATOR YELLOW 3" DIAMETER 40/RL,640/CS
PART NUMBER.............. KEEP MAX=3000
UNIT OF MEASURE.......... EA (EACH)
SPECIAL CODING...........      T
ACCOUNT CODE............. 4344
MONTHS LEAD TIME.........  1
MINIMUM BALANCE..........       1,500
MAXIMUM BALANCE..........       3,000
QUANTITY ON HAND.........       3,640
DATE LAST ISSUED (MDY)... 06-05-2013
BEGINNING YEAR QUANTITY..       4,360
QUANTITY ISSUED THIS YR..       6,480
QUANTITY ISSUED LAST YR..      17,200
UNIT AVERAGE PRICE.......           0.5339
TOTAL VALUE..............       1,943.40
TOTAL BACK ORDER REQ QTY.           0
WEEKS ON BACK ORDER......  0
TIMES ON BACK ORDER......  3
PRINT BIN LABEL.......... N (Y=YES N=NO)

TOTAL QTY ON P.O.'S......           0
    P.O. NUMBERS ISSUED..
    P.O. QUANTITIES......
    P.O. DUE IN DATE.....


LAST UPDATE ID/DATE: DR11026 02-14-2013

PF1 =        PF2 =        PF3 =SUPMENU PF4 =        PF5 =        PF6 =
PF7 =        PF8 =        PF9 =        PF10=        PF11=        PF12=CLEAR

QUERY COMPLETE
MA  +   a                                                          05/013
```

Inventory Process



Note 1: Once this job is run, the Supply System is locked and requisitions cannot be added, closed, modified or printed. This report prints off two copies; An Office copy and a Warehouse copy.

Note 2: This report can also be printed from Screen SUPX150 and selecting Job Number 02.

Note 3: Call Joel is when the only adjustment that can be made is to fix the database.

Note 4: Running this job releases the Supply System so requisitions can be added, closed, modified or printed.

APPENDIX M

REPORT	REPORT DESCRIPTION	STATUS	COMMENTS
SUPB100	Back Order Report	Not Needed.	
SUPB140	Unfilled Requisitions Older than 7 Days	Not Needed.	
SUPB150	Purchase Orders Due In List	On Demand Report.	Add Original Due In Date. Keep Every Date Change. Comments are Optional. May not be needed if Dashboard works.
SUPB180	Inventory Master List	Not Needed.	
SUPB200	Inventory Value by Class Report	On Demand Report.	No Changes
SUPB210	Purchase Order Back Order Report	Not Needed.	Create a Vendor Performance Report
SUPB220	Outstanding Purchase Order Report	Not Needed.	Create a Vendor Performance Report
SUPB230	Purchase Orders Received Report	Auto Generate Report.	Print Daily. Don't Need "Thru" Dates. Eliminate the Date Received Column.
SUPB240	Stock Status Detail Report	Not Needed.	It Never Worked.
SUPB250	Need to Order Report	Not Needed.	If within 10% of Minimum Generate P/O Automatically.
SUPB260	Multiple Locations Report	Not Needed.	
SUPB280	Requisition/Returns Expense Report by OE	Waiting on Tom R.	On Demand? Ability to Print.
SUPB290	Class/Stock Products Added/Deleted Report	On Demand Report.	No Changes
SUPB300	Sales Dollars by Class Report	Auto Generate Report.	Yearly Report
SUPB310	Stock Products Not Issued Since Report	On Demand Report.	No Changes
SUPB360	Negative Quantity On Hand List	Possibly Needed.	More Analysis Needed During Application Development.
SUPB370	Back Order Requisition List	Not Needed.	

REPORT	REPORT DESCRIPTION	STATUS	COMMENTS
SUPB380	Requisition/Returns Report	Auto Generate Report.	Print Daily. Don't Need "Thru" Dates. Eliminate "Shipped Date" Column.
SUPB390	Print Shop Need to Order Report	Used by Print Shop	
SUPB400	Outsides Stock Requisitions/Returns	Districts & Divisions receive this monthly showing their purchases and returns	New system should allow them to generate their own report or review on-line.
SUPB430	Accounts Payable Report	Auto Generate Report.	End of Month Report

SUPB100 **APPENDIX M**

NDOR SUPPLY INVENTORY SYSTEM
STOCK REQUISITION - STOCK CONTROL COPY

(5)

SHIP TO NAME & ADDRESS:
ALLIANCE SHOP
ALLIANCE NE

BACKORDER

REQUISITION NO. :1305708
COSTING O.E. NO.:650
RADIO CALL NO. :514

PIECES SHIPPED: 16X

CLASS-STOCK U/M	REQUESTED	QUANTITY SHIPPED	BACK ORDER	LOCATION BASE SEC BAY BIN	FCP
01 18-25500 CLEANER CN	12	(12)	( )	(101 - 0L - 03 - 104)	F
BIODEGRADEABLE DEGREASER,NON TOXIC,12.5OZ/12/CS					
02 18-29800 URINAL BLOCK CS	1	(1)	( )	(101 - 0G - 04 - 102)	F
ENZYME BACTERIAL KILLER W/SCREEN, 12/CS					
03 18-50990 MOP HEAD EA	2	(2)	( )	(101 - 0H - 00 - 040)	F
WET 20 OZ					
04 80-27000 FIRST AID KIT EA	5	(2)	( )	(103 - 0A - 07 - 001)	P
TEN UNIT TYPE					
05 60-00320 FLAG, NATIONAL EA	5	(5)	( )	(103 - 0A - 01 - 002)	F
OFFICIAL UNITED STATES NYLON 4'X 6'					
06 60-00300 FLAG, STATE EA	5	(5)	( )	(103 - 0A - 04 - 080)	F
OFFICIAL NEBRASKA NYLON 3'X 5'					
07 80-27000 FIRST AID KIT EA	3	(3)	( )	(103 - 0A - 07 - 001)	B
TEN UNIT TYPE					

(10)

REQUESTED BY:
CHARLES MILES
DATE:06-05-2013

APPROVED BY:
PAUL HOWARD
DATE:06-05-2013

FILLED BY:
SJ
DATE:06-05-2013

RECEIVED BY:
DATE: - -

DATE/TIME PRINTED: 06-05-13 AT: 14:03

6-27-2013

PAGE: 1 OF 1

SUPB100 **APPENDIX M**

NDOR SUPPLY INVENTORY SYSTEM
STOCK REQUISITION - STOCK CONTROL COPY

(5)

SHIP TO NAME & ADDRESS:
TURK BLAKE
DISTRICT 8
AINSWORTH

1 Bund

REQUISITION NO. :1400128
COSTING O.E. NO.:903
RADIO CALL NO. :811

PIECES SHIPPED:

CLASS-STOCK U/M	REQUESTED	QUANTITY SHIPPED	BACK ORDER	LOCATION BASE SEC BAY BIN	FCP
01 45-12000 EA	BLADE MOWER 3	(3)	( )	(105 - 0A - 03 - 100)	LEFT WING FOR SCHULTE MOWER 1/2" X 4" X 25" CW
02 45-12300 EA	BLADE MOWER 3	(3)	( )	(105 - 0B - 04 - 200)	RIGHT WING FOR SCHULTE MOWER 1/2" X 4" X 25" CCW
03 45-12500 EA	BLADE MOWER 3	(3)	( )	(105 - 0A - 03 - 101)	CENTER FOR SCHULTE MOWER 1/2" X 4" X 28" CW
04 45-12000 EA	BLADE MOWER 3	(3)	( )	(105 - 0A - 03 - 100)	LEFT WING FOR SCHULTE MOWER 1/2" X 4" X 25" CW
05 45-12300 EA	BLADE MOWER 3	(3)	( )	(105 - 0B - 04 - 200)	RIGHT WING FOR SCHULTE MOWER 1/2" X 4" X 25" CCW
06 45-12500 EA	BLADE MOWER 3	(3)	( )	(105 - 0A - 03 - 101)	CENTER FOR SCHULTE MOWER 1/2" X 4" X 28" CW

REQUESTED BY:
SUSAN HOOVER
DATE:06-26-2013

APPROVED BY:
CHARLES OSBORN
DATE:06-27-2013

FILLED BY: TB
DATE: 6-27-13

RECEIVED BY:
DATE: - -

DATE/TIME PRINTED: 06-27-13 AT: 07:07

PAGE: 1 OF 1

JOB
NUM DAILY BATCH JOB SUBMITTAL SELECTIONS
=== ==========

21 PURCHASE ORDERS DUE IN LIST SUPB150

22 UNFILLED REQUISITIONS OLDER THAN 7 DAYS LIST SUPB140

23 NEGATIVE QUANTITY ON HAND LIST SUPB360

24 BACK-ORDERED REQUISITIONS LIST SUPB370

25 PURCHASE ORDERS RECEIVED REPORT SUPB230
SELECT BY FROM/THRU DATES

26 REQUISITIONS/RETURNS REPORT SUPB380
SELECT BY FROM/THRU DATES

JOB SELECTION:
DATES (M-D-Y) FROM: THRU:

PRINTER SELECTION: 2297

PF1 =JOBMENU PF2 = PF3 =SUPMENU PF4 = PF5 = PF6 =
PF7 =DAILY PF8 =WEEKLY PF9 =MONTHLY PF10=YEARLY PF11=PHY INV PF12=CLEAR

ENTER JOB SELECTION - PRESS ENTER

DATE: 06-27-14
SUPB150

NDOR SUPPLY INVENTORY SYSTEM
PURCHASE ORDERS DUE-IN LIST

CLASS & STOCK NO	KEYWORD	U/M	P.O. NUMBER	QUANTITY ORDERED	DATE DUE-IN	-------NOTES-------
10-07500	BOLT/SPACER	BX	4263009	10	06-30-2014	
10-07600	NUT	C	4264341	20	07-30-2014	
10-21050	POST GUARD RAIL	EA	4264332	100	08-14-2014	
16-14000	PAINT	GL	4265718	10	06-30-2014	
18-00500	HI-DRI	BG	4264303	100	07-01-2014	
18-25000	CLEANER	CN	4264326	19	07-01-2014	
24-10200	CHAIN HOOK	EA	4265726	50	06-30-2014	
45-11126	BIT, MILLING	CN	4265727	40	07-07-2014	
45-13615	STROBE LIGHT	EA	4264323	25	05-30-2014	
45-13620	STROBE LIGHT	EA	4265665	36	06-30-2014	
45-13630	STROBE LIGHT	EA	4264317	30	08-14-2014	
52-02140	CONTROLLER, NEW	EA	0526139	3	06-14-2014	
52-12090	LOAD PACK	EA	4265699	50	06-30-2014	
52-17060	CAP POLE	EA	4265661	6	06-30-2014	
52-17124	TRANS BASE, NEW	EA	4265662	10	07-30-2014	
58-00900	SAMPLE, CAN	EA	4264293	450	06-30-2014	
58-17650	PAINT MARKING	CS	4264339	95	07-30-2014	
58-36950	SAMPLE, JAR	EA	4264343	288	07-14-2014	
60-00320	FLAG, NATIONAL	EA	4263730	9	05-15-2014	
60-00320	FLAG, NATIONAL	EA	4263521	7	03-14-2014	
70-08970	ENVELOPE, CARD	BD	4265656	35	06-14-2014	
70-26000	FRAME,CERTIF	EA	5260816	10	08-14-2014	
80-14030	RAIN SUIT	EA	4264319	20	06-25-2014	
80-14051	RAIN SUIT	EA	4264301	15	06-25-2014	
80-27240	GARMENT, PANTS	EA	0533781	100	07-01-2014	
80-27330	GARMENT, SHIRT	EA	0533781	200	07-01-2014	
80-27870	GLASSES, SAFETY	PR	5260809	72	07-14-2014	

NDOR SUPPLY INVENTORY SYSTEM
PURCHASE ORDERS DUE-IN LIST

CLASS & STOCK NO	KEYWORD	U/M	P.O. NUMBER	QUANTITY ORDERED	DATE DUE-IN	-------NOTES-------
85-91800	WASHER	C	4265681	50	06-30-2014	
86-00590	SIGN	EA	4264322	125	07-15-2014	
86-00598	SIGN	EA	4264322	100	07-15-2014	
86-00720	SIGN	EA	4265737	25	06-30-2014	
86-00800	SIGN	EA	4260820	20	07-30-2014	
86-00951	SIGN	EA	5260815	7	07-30-2014	
86-03001	SIGN	EA	5260807	45	07-30-2014	
86-48055	SIGN	EA	5260807	25	07-30-2014	
86-48060	SIGN	EA	5260815	10	07-30-2014	
86-50040	SIGN	EA	4264322	20	07-15-2014	
86-50080	SIGN	EA	4264330	15	07-15-2014	
86-50090	SIGN	EA	4264338	130	07-30-2014	
86-50280	SIGN	EA	4264338	75	07-30-2014	
86-50300	SIGN	EA	4263748	100	05-30-2014	
86-50305	SIGN	EA	4264322	25	07-15-2014	
86-50310	SIGN	EA	5260815	150	07-30-2014	
86-50315	SIGN	EA	4264330	20	07-15-2014	
86-50500	SIGN	EA	4264330	25	07-15-2014	
86-50510	SIGN	EA	4264330	10	07-15-2014	
86-80005	SIGN	EA	5260807	40	07-30-2014	
86-80020	SIGN	EA	4264336	20	07-15-2014	
86-80030	SIGN	EA	4264336	10	07-15-2014	
86-80215	SIGN	EA	4264336	30	07-15-2014	
86-80310	SIGN	EA	4264336	20	07-15-2014	
86-80315	SIGN	EA	5260807	40	07-30-2014	
86-80325	SIGN	EA	4264336	5	07-15-2014	
86-80335	SIGN	EA	5260807	10	07-30-2014	
86-80410	SIGN	EA	5260807	70	07-30-2014	
86-80600	SIGN	EA	4264322	60	07-15-2014	
86-90000	SIGN	EA	5260815	32	07-30-2014	

NDOR SUPPLY INVENTORY SYSTEM
UNFILLED REQUISITIONS OLDER THAN 7 DAYS

REQUISITION NUMBER	CLASS & STOCK NO	PRODUCT DESCRIPTION	QTY	OE	REQUISITION DATE
1405975	80-80625	SAFETY YELLOW/GREEN LARGE CHEST 48"	6	630	06-05-2014
1405983	80-80625	SAFETY YELLOW/GREEN LARGE CHEST 48"	2	390	06-05-2014
1405998	58-00900	1/2 GALLON, METAL, WITH LID	12	630	06-06-2014
1406015	58-00900	1/2 GALLON, METAL, WITH LID	40	650	06-09-2014
1406019	80-14051	RAIN SUIT, ELASTIC WAIST PANT, LARGE	1	670	06-09-2014
1406024	80-14051	RAIN SUIT, ELASTIC WAIST PANT, LARGE	2	610	06-09-2014
1406032	58-00900	1/2 GALLON, METAL, WITH LID	30	630	06-09-2014
1406042	80-80625	SAFETY YELLOW/GREEN LARGE CHEST 48"	20	680	06-10-2014
1406042	80-80775	ORANGE SAFETY, X-LARGE, CHEST 52"	10	680	06-10-2014
1406058	85-19300	EXTRUDED ALUMINUM, 12', USE W/85-19400	10	640	06-10-2014
1406088	86-00590	DO NOT PASS 24X30	13	640	06-11-2014
1406088	86-00598	PASS WITH CARE 24X30	5	640	06-11-2014
1406089	86-00590	DO NOT PASS 24X30	15	640	06-11-2014
1406089	86-00598	PASS WITH CARE 24X30	12	640	06-11-2014
1406090	58-00900	1/2 GALLON, METAL, WITH LID	50	640	06-11-2014
1406123	80-80775	ORANGE SAFETY, X-LARGE, CHEST 52"	5	670	06-13-2014
.406125	85-19300	EXTRUDED ALUMINUM, 12', USE W/85-19400	10	650	06-13-2014
.406137	85-89650	PORTABLE W/DETACHABLE BASE	22	660	06-16-2014
.406143	85-89740	TELSPAR,RECEIVER,REDI-TORQUE,W/85-89720&85-89730	8	670	06-16-2014
.406149	58-00900	1/2 GALLON, METAL, WITH LID	20	680	06-16-2014

REQUISITION NUMBER	CLASS & STOCK NO	PRODUCT DESCRIPTION	QTY	OE	REQUISITION DATE
1406165	58-00900	1/2 GALLON, METAL, WITH LID	50	630	06-17-2014
1406175	86-80215	REDUCE SPEED-LOOSE GRAVEL ON SURF 48X48 ORANGE	2	650	06-17-2014
1406175	86-80410	NO PASSING ZONES NOT MARKED 48X48 ORANGE	6	650	06-17-2014
1406193	58-00900	1/2 GALLON, METAL, WITH LID	10	680	06-17-2014
1406200	86-50300	OBJECT MARKER TYPE 3-LEFT 3 STRIPE MIN 12X36	15	610	06-18-2014
1406207	86-80600	DETOUR 24X12 ORANGE	10	630	06-18-2014
1406212	58-00900	1/2 GALLON, METAL, WITH LID	40	640	06-18-2014
1406216	80-80625	SAFETY YELLOW/GREEN LARGE CHEST 48"	6	610	06-19-2014
1406235	85-37800	TEMPORARY WHITE 4" X 50YD, 2RL/BX	2	640	06-20-2014
1406238	86-50510	ROAD WORK 1 MILE 48X48 ORANGE	4	650	06-20-2014

DATE: 06-27-14
SUPB360

NDOR SUPPLY INVENTORY SYSTEM
CLASS-STOCK PRODUCTS WITH NEGATIVE QUANTITY ON HAND

CLASS-STOCK	KEYWORD	QUANTITY ON HAND	LOCATION
86-00800	SIGN	1-	104-EE-00-204

NDOR SUPPLY INVENTORY SYSTEM
BACKORDERED REQUISITIONS

REQUISITION NUMBER	CLASS & STOCK NO	PRODUCT DESCRIPTION	BACK ORDERED QTY	OE	REQUISITION DATE
1405975	80-80625	SAFETY YELLOW/GREEN LARGE CHEST 48"	6	630	06-05-2014
1405983	80-80625	SAFETY YELLOW/GREEN LARGE CHEST 48"	2	390	06-05-2014
1405998	58-00900	1/2 GALLON, METAL, WITH LID	12	630	06-06-2014
1406015	58-00900	1/2 GALLON, METAL, WITH LID	40	650	06-09-2014
1406019	80-14051	RAIN SUIT, ELASTIC WAIST PANT, LARGE	1	670	06-09-2014
1406024	80-14051	RAIN SUIT, ELASTIC WAIST PANT, LARGE	2	610	06-09-2014
1406032	58-00900	1/2 GALLON, METAL, WITH LID	30	630	06-09-2014
1406042	80-80625	SAFETY YELLOW/GREEN LARGE CHEST 48"	20	680	06-10-2014
1406042	80-80775	ORANGE SAFETY, X-LARGE, CHEST 52"	10	680	06-10-2014
1406058	85-19300	EXTRUDED ALUMINUM, 12', USE W/85-19400	10	640	06-10-2014
1406088	86-00590	DO NOT PASS 24X30	13	640	06-11-2014
1406088	86-00598	PASS WITH CARE 24X30	5	640	06-11-2014
1406089	86-00590	DO NOT PASS 24X30	15	640	06-11-2014
1406089	86-00598	PASS WITH CARE 24X30	12	640	06-11-2014
1406090	58-00900	1/2 GALLON, METAL, WITH LID	50	640	06-11-2014
1406123	80-80775	ORANGE SAFETY, X-LARGE, CHEST 52"	5	670	06-13-2014
1406125	85-19300	EXTRUDED ALUMINUM, 12', USE W/85-19400	10	650	06-13-2014
1406137	85-89650	PORTABLE W/DETACHABLE BASE	22	660	06-16-2014
1406143	85-89740	TELSPAR,RECEIVER,REDI-TORQUE,W/85-89720&85-89730	8	670	06-16-2014
1406149	58-00900	1/2 GALLON, METAL, WITH LID	20	680	06-16-2014

REQUISITION NUMBER	CLASS & STOCK NO	PRODUCT DESCRIPTION	BACK ORDERED QTY	OE	REQUISITION DATE
1406165	58-00900	1/2 GALLON, METAL, WITH LID	50	630	06-17-2014
1406175	86-80215	REDUCE SPEED-LOOSE GRAVEL ON SURF 48X48 ORANGE	2	650	06-17-2014
1406175	86-80410	NO PASSING ZONES NOT MARKED 48X48 ORANGE	6	650	06-17-2014
1406193	58-00900	1/2 GALLON, METAL, WITH LID	10	680	06-17-2014
1406200	86-50300	OBJECT MARKER TYPE 3-LEFT 3 STRIPE MIN 12X36	15	610	06-18-2014
1406207	86-80600	DETOUR 24X12 ORANGE	10	630	06-18-2014
1406212	58-00900	1/2 GALLON, METAL, WITH LID	40	640	06-18-2014
1406216	80-80625	SAFETY YELLOW/GREEN LARGE CHEST 48"	6	610	06-19-2014
1406235	85-37800	TEMPORARY WHITE 4" X 50YD, 2RL/BX	2	640	06-20-2014
1406238	86-50510	ROAD WORK 1 MILE 48X48 ORANGE	4	650	06-20-2014
1406255	12-08000	SMALL PIG ABSORBENT SOCK, 3" DIAMETER, 25/BX	6	630	06-23-2014
1406255	16-19100	445 SAFETY ORANGE FOR CONCRETE RIGHT-OF-WAY MARKER	4	630	06-23-2014
1500006	85-42000	ALUMINUM CLIP POST ASSEMBLY FOR SIGN USE	262	620	06-24-2014
1500006	86-00951	ONE WAY ARROW (LEFT) 54X18	1	620	06-24-2014
1500007	86-50300	OBJECT MARKER TYPE 3-LEFT 3 STRIPE MIN 12X36	10	620	06-24-2014
1500022	70-88915	JAN 02-HIGHWAY SAFETY USE ONLY, 100SS/BD	4	340	06-24-2014
1500032	85-19300	EXTRUDED ALUMINUM, 12', USE W/85-19400	10	610	06-24-2014
1500035	85-89715	TELSPAR WINGED OMNI ANCHOR 2 1/4" X 2 1/4" X 3'	39	640	06-25-2014
1500056	86-00800	SNOWPLOW-FLYING SAND 48X24	1	660	06-25-2014

DATE: 06-27-14
SUPB230

NDOR SUPPLY INVENTORY SYSTEM
PURCHASE ORDERS RECEIVED REPORT
FOR PERIOD: 06-26-2014 THRU: 06-26-2014

PURCHASE ORDER NO	CLASS & STOCK NO	KEY WORD	P/O TYPE	DATE RECEIVED	QUANTITY RECEIVED	U/M	FINAL/CANCEL PARTIAL CODE	DOLLAR AMOUNT
0529620	18-36900	TRASH BAG	DOR	06-26-2014	60	CS	F	1,287.60
					PURCHASE ORDER 0529620 TOTAL:			1,287.60
4263815	10-00900	BLOCK GD RAIL	DOR	06-26-2014	70	EA	F	924.00
					PURCHASE ORDER 4263815 TOTAL:			924.00
4264342	24-06000	CAN, GAS	DOR	06-26-2014	6	EA	F	175.74
					PURCHASE ORDER 4264342 TOTAL:			175.74
					GRAND TOTAL:			2,387.34

NDOR SUPPLY INVENTORY SYSTEM
SHIPPED REQUISITIONS / RECEIVED RETURNS REPORT
FOR PERIOD: 06-26-2014 THRU: 06-26-2014

RDO CALL NUMBER	REQ NUMBER	CLASS & STOCK NO	KEYWORD	REQ TYP	SHIPPED DATE	QUANTITY SHIPPED	U/M	AVERAGE PRICE	TOTAL AMOUNT
442	1406187-01	85-89505	POST SIGN	RTN	06-26-2014	2-	EA	611.0783	1,222.16-
					TOTALS:	2-*			1,222.16-*
413	1406237-01	16-40000	REPELLENT,INSCT	REQ	06-26-2014	12	EA	5.1567	61.88
413	1406237-02	85-89796	POST SIGN	REQ	06-26-2014	50	EA	22.3800	1,119.00
413	1406237-03	85-89710	POST SIGN	REQ	06-26-2014	50	EA	7.3399	367.00
					TOTALS:	112 *			1,547.88 *
445	1406252-01	86-00115	SIGN	REQ	06-26-2014	4	EA	21.5000	86.00
					TOTALS:	4 *			86.00 *
413	1406260-01	12-08538	OIL, MOTOR	REQ	06-26-2014	6	CS	16.2751	97.65
					TOTALS:	6 *			97.65 *
445	1406261-01	85-10120	BOLT, SIGN	REQ	06-26-2014	2	EA	1.0646	2.13
					TOTALS:	2 *			2.13 *
445	1500015-01	80-28090	GLOVES, LEATHER	REQ	06-26-2014	6	PR	5.0482	30.29
445	1500015-02	85-10120	BOLT, SIGN	REQ	06-26-2014	10	EA	1.0646	10.65
445	1500015-03	80-27974	GLOVES, NITRILE	REQ	06-26-2014	3	BX	8.2711	24.81
					TOTALS:	19 *			65.75 *
375	1500026-01	60-00900	BOX, PACKING	REQ	06-26-2014	25	EA	.4500	11.25
					TOTALS:	25 *			11.25 *
444	1500028-01	45-16240	MUD FLAP	REQ	06-26-2014	8	EA	19.1612	153.29
					TOTALS:	8 *			153.29 *
210	1500029-01	80-23700	FILTER MASK	REQ	06-26-2014	20	EA	.6018	12.04
					TOTALS:	20 *			12.04 *
412	1500030-01	45-04700	BLADE PLOW	REQ	06-26-2014	5	EA	93.1415	465.71
412	1500030-02	45-04700	BLADE PLOW	REQ	06-26-2014	5	EA	93.1415	465.71
					TOTALS:	10 *			931.42 *
442	1500035-01	85-89715	POST SIGN	REQ	06-26-2014	11	EA	16.0400	176.44
					TOTALS:	11 *			176.44 *
	1500048-01	70-89028	FORM DR-4	REQ	06-26-2014	12	PD	1.2399	14.88
					TOTALS:	12 *			14.88 *

NDOR SUPPLY INVENTORY SYSTEM
SHIPPED REQUISITIONS / RECEIVED RETURNS REPORT
FOR PERIOD: 06-26-2014 THRU: 06-26-2014

RDO CALL NUMBER	REQ NUMBER	CLASS & STOCK NO	KEYWORD	REQ TYP	SHIPPED DATE	QUANTITY SHIPPED	U/M	AVERAGE PRICE	TOTAL AMOUNT
444	1500060-02	80-28090	GLOVES, LEATHER	REQ	06-26-2014	6	PR	5.0482	30.29
444	1500060-03	80-27850	GLASSES, SAFETY	REQ	06-26-2014	12	PR	1.8261	21.91
444	1500060-04	80-27860	GLASSES, SAFETY	REQ	06-26-2014	12	PR	2.0610	24.73
					TOTALS:	36 *			106.85 *
341	1500061-01	80-00900	BANDAGE	REQ	06-26-2014	3	PK	.6900	2.07
341	1500061-02	80-28080	GLOVES, LEATHER	REQ	06-26-2014	12	PR	4.9874	59.85
341	1500061-03	80-28090	GLOVES, LEATHER	REQ	06-26-2014	12	PR	5.0482	60.58
341	1500061-04	80-80750	VEST, MESH	REQ	06-26-2014	6	EA	6.3000	37.80
341	1500061-05	85-38500	PAVEMENT MARKER	REQ	06-26-2014	1	BX	138.0000	138.00
341	1500061-06	85-38525	PAVEMENT MARKER	REQ	06-26-2014	1	BX	123.0000	123.00
					TOTALS:	35 *			421.30 *
311	1500062-01	80-27860	GLASSES, SAFETY	REQ	06-26-2014	12	PR	2.0610	24.73
					TOTALS:	12 *			24.73 *
	1500063-01	24-46502	PADLOCK	REQ	06-26-2014	6	EA	11.4491	68.69
	1500063-02	52-12098	LUMINAIRE	REQ	06-26-2014	1	EA	186.8882	186.89
					TOTALS:	7 *			255.58 *
651	1500064-01	86-20000	SIGN	REQ	06-26-2014	3	EA	70.6000	211.80
651	1500064-02	86-80400	SIGN	REQ	06-26-2014	6	EA	108.5256	651.15
651	1500064-03	86-80315	SIGN	REQ	06-26-2014	6	EA	108.5000	651.00
651	1500064-04	86-80045	SIGN	REQ	06-26-2014	6	EA	108.5561	651.34
651	1500064-05	86-50520	SIGN	REQ	06-26-2014	6	EA	108.5000	651.00
					TOTALS:	27 *			2,816.29 *
101	1500068-01	80-52410	POISON IVY-OINT	REQ	06-26-2014	4	PK	1.5173	6.07
101	1500068-02	80-68400	STING KILL	REQ	06-26-2014	4	PK	1.5000	6.00
101	1500068-03	58-17650	PAINT MARKING	REQ	06-26-2014	6	CS	28.2086	169.25
					TOTALS:	14 *			181.32 *
723	1500070-01	70-26000	FRAME,CERTIF	REQ	06-26-2014	2	EA	15.0000	30.00
					TOTALS:	2 *			30.00 *
131	1500076-01	45-13630	STROBE LIGHT	REQ	06-26-2014	2	EA	125.0000	250.00
					TOTALS:	2 *			250.00 *
					TOTALS:	0 *			.00 *

NDOR SUPPLY INVENTORY SYSTEM
SHIPPED REQUISITIONS / RECEIVED RETURNS REPORT
FOR PERIOD: 06-26-2014 THRU: 06-26-2014

RDO CALL NUMBER	REQ NUMBER	CLASS & STOCK NO	KEYWORD	REQ TYP	SHIPPED DATE	QUANTITY SHIPPED	U/M	AVERAGE PRICE	TOTAL AMOUNT
	5260822-01	70-61155	MANUAL	PRT	06-26-2014	40	BK	9.8200	392.80
					TOTALS:	40 *			392.80 *
								REPORT TOTAL	12,640.89 *

SUPX152 **APPENDIX M** SUPPLY INVENTORY SYSTEM 06/27/14
08/04/2006 BATCH JOB SUBMITTAL 07:05:58

JOB
NUM WEEKLY BATCH JOB SUBMITTAL SELECTIONS
=== ==========

✓ 41 STOCK STATUS DETAIL REPORT Did Not Print anything OK SUPB240

42 NEED-TO-ORDER REPORT SUPB250

43 PURCHASE ORDER BACK-ORDER REPORT SUPB210

44 INVENTORY VALUE BY CLASS REPORT SUPB200

45 MULTIPLE LOCATIONS REPORT SUPB260

✓ 46 PRINT SHOP NEED-TO-ORDER REPORT SUPB390

JOB SELECTION:

PRINTER SELECTION: 2297

PF1 =JOBMENU PF2 = PF3 =SUPMENU PF4 = PF5 = PF6 =
PF7 =DAILY PF8 =WEEKLY PF9 =MONTHLY PF10=YEARLY PF11=PHY INV PF12=CLEAR

ENTER JOB SELECTION - PRESS ENTER

DATE: 06-23-14
SUPB250

NDOR SUPPLY INVENTORY SYSTEM
NEED-TO-ORDER REPORT

PAGE: 1

CLASS & STOCK NO	PART NUMBER KEYWORD/DESCRIPTION	U/M	QUANTITY ISSUED THIS YEAR	QUANTITY ISSUED LAST YEAR	LAST ISSUE MO-YR	QUANTITY ON HAND	BACK ORDER QUANTITY ON REQS	MINIMUM BALANCE	MAXIMUM BALANCE	MOS LEAD TIME
10-07100	MAIL BOX PKG	PK	55	378	06-14	60	0	100	200	2
	SINGLE, MAIL BOX BRACKET W/HARDWARE									
10-07600	NUT	C	5	42	06-14	5	0	8	16	1
	5/16" FLANGE FOR MARION BREAKAWAY									

NDOR SUPPLY INVENTORY SYSTEM
NEED-TO-ORDER REPORT

CLASS & STOCK NO	PART NUMBER KEYWORD/DESCRIPTION	U/M	QUANTITY ISSUED THIS YEAR	QUANTITY ISSUED LAST YEAR	LAST ISSUE MO-YR	QUANTITY ON HAND	BACK ORDER QUANTITY ON REQS	MINIMUM BALANCE	MAXIMUM BALANCE	MOS LEAD TIME
85-07100	BP-HIDF BARRICADE	EA	0	363	06-14	62	0	65	130	1
	TYPE III ORANGE & WHITE 8FT/6" STRIPE, PLANKS ONLY									
85-10110	BOLT, SIGN	C	0	120	06-14	23	0	25	50	1
	5/16" X 2 1/2" USS PLATED FLANGE BOLT W/FLANGE NUT									
85-10220	RIVET	C	7	212	06-14	31	0	35	70	1
	3/8" DRIVE RIVET W/WASHER									
85-14200	25 PER/BOX	BX	8	134	06-14	9	0	12	24	1
	POST DELINEATOR 48" BLACK, 13" TOP, SHUR-FLEX NO SQ TUBE/SHEETING									
85-16200	BOLT, SIGN	C	4	23	06-14	1	0	4	8	1
	1/4" X 1" USS W/NUT PLATED, HEX HEAD									
85-17400	BOLT, SIGN	C	0	195	06-14	20	0	42	84	1
	1/4" X 3" USS W/NUT, PLATED HEX HEAD									
85-19400	BRACKET, SIGN	BX	0	54	06-14	9	0	14	28	1
	2" TELSPAR POST HARDWARE, USE W/85-19300, 10/BX									
85-37800	PAVEMENT MARKER TEMPORARY WHITE 4" X 50YD, 2RL/BX	BX	8	28	06-14	0	2	6	12	1
85-89796	POST SIGN	EA	100	4,000	06-14	300	0	360	1,260	1
	TELSPAR, 2" OD X 10', 25/BDL									

DATE: 03-18-13
SUPB210

NDOR SUPPLY INVENTORY SYSTEM
PURCHASE ORDER BACK ORDER REPORT

CLASS & STOCK NO	KEYWORD	U/M	PURCHASE ORDER NO	PURCHASE ORDER DATE	DUE IN DATE	QUANTITY BACK ORDERED	UNIT PRICE	TOTAL BACK ORDER VALUE	WEEKS ON BACK ORDER	TIMES ON BACK ORDER
12-05050	FLUID, WASHER	GL	3261617	03-11-2013	03-29-2013	12	1.6500	19	0	0
18-59050	RAG WIPING	CS	0461300	02-28-2013	03-15-2013	85	33.0800	2,811	0	0
24-82250	WRENCH, PIPE	EA	3262571	03-13-2013	03-27-2013	2	39.3300	78	0	1
45-13645	STROBE LIGHT	EA	3262560	03-07-2013	04-15-2013	10	88.0000	880	1	4
52-02140	CONTROLLER, NEW	EA	0444077	10-29-2012	03-30-2013	6	3,750.0000	22,500	0	0
70-40484	PAPER	RM	0463533	03-13-2013	03-27-2013	120	7.1000	852	0	0
80-20330	COVERALL	EA	3262552	03-04-2013	04-01-2013	12	14.1100	169	0	3
80-29400	GLOVES, LEATHER	PR	3262535	02-27-2013	03-30-2013	72	6.3700	458	0	1
86-00010	SIGN	EA	3261528	02-15-2013	03-15-2013	50	36.6200	1,831	0	9

NDOR SUPPLY INVENTORY SYSTEM
INVENTORY VALUE BY CLASS

CLASS	NUMBER OF INVENTORY PRODUCTS	INVENTORY VALUE
10	31	83,656.58
12	32	82,994.47
16	20	12,889.31
18	65	47,172.05
24	58	39,508.02
45	60	1,241,894.12
50	3	3,143.53
52	92	256,412.96
58	47	58,972.60
60	21	13,980.64
70	110	44,175.10
80	174	69,087.41
85	117	317,605.92
86	252	202,259.07
99	3	.00
TOTAL	1,085	2,473,751.78

NDOR SUPPLY INVENTORY SYSTEM
STOCK NUMBERS WITH MULTIPLE LOCATIONS

CLASS & STOCK NO	KEY WORD	QUANTITY ON HAND	U/M	BASE	SECTION	BAY	BIN
86-50090	SIGN	173	EA	101	0E	05	104
86-50090	SIGN	0	EA	104	CC	FL	001

DATE: 06-27-14
SUPB390

NDOR SUPPLY INVENTORY SYSTEM
PRINT SHOP NEED-TO-ORDER REPORT

CLASS & STOCK NO	PART NUMBER KEYWORD/DESCRIPTION	U/M	QUANTITY ISSUED THIS YEAR	QUANTITY ISSUED LAST YEAR	LAST ISSUE MO-YR	QUANTITY ON HAND	BACK ORDER QUANTITY ON REQS	MINIMUM BALANCE	MAXIMUM BALANCE	MOS LEAD TIME
70-09900		BX	0	14	06-14	9	0	10	20	1
	ENVELOPE MAILING, BROWN SELF-SEAL 10" X 13" (500/BX)									
70-61150		BK	3	26	06-14	8	0	10	20	1
	MANUAL BRIDGE PLAN READING ANSWER BOOK									
70-88915		BD	6	36	06-14	0	4	5	25	1
	FORM DR-40A JAN 02-HIGHWAY SAFETY USE ONLY, 100SS/BD									
70-89213		BD	0	39	06-14	3	0	5	20	1
	FORM DR-170 DEC 07-MOTOR POOL VEH REQUEST & TRIP RPT, 50ST/BD									
70-89215		PK	0	29	04-14	9	0	20	50	1
	FORM DR-172 FEB 98-FIRE EXT MONTHLY INSP DATA 50/PK									

JOB NUM — MONTHLY BATCH JOB SUBMITTAL SELECTIONS

61	REQUISITIONS/RETURNS EXPENSE REPORT BY OE SELECT BY FROM/THRU DATES	SUPB280
62	PURCHASE ORDERS RECEIVED REPORT SELECT BY FROM/THRU DATES	SUPB230
63	OUTSTANDING PURCHASE ORDER REPORT	SUPB220
64	CLASS-STOCK PRODUCTS ADDED/DELETED REPORT SELECT BY FROM/THRU DATES	SUPB290
65	OUTSIDE STOCK REQUISITIONS/RETURNS SELECT BY FROM/THRU DATES OR STOCK REQUISITION/RETURN NO.	SUPB400

JOB SELECTION:
DATES (M-D-Y) FROM: THRU:
REQ./RETURN NO. :

PRINTER SELECTION: 2297

PF1 =JOBMENU PF2 = PF3 =SUPMENU PF4 = PF5 = PF6 =
PF7 =DAILY PF8 =WEEKLY PF9 =MONTHLY PF10=YEARLY PF11=PHY INV PF12=CLEAR

ENTER JOB SELECTION - PRESS ENTER

NDOR SUPPLY INVENTORY SYSTEM
REQUISITIONS/RETURNS EXPENSE REPORT BY OE
FOR PERIOD: 08-29-2012 THRU: 09-25-2012

ORGANIZATION CODE: 904 TITLE: ADMINSTRATIVE

RDO CALL NUMBER	REQ NUMBER	CLASS & STOCK NO	KEYWORD	REQ TYP	SHIPPED DATE	QUANTITY SHIPPED	U/M	AVERAGE PRICE	TOTAL AMOUNT
	1301073	85-89553	POST SIGN	REQ	08-29-2012	100	EA	11.0600	1,106.00
	1301100	80-80625	VEST, MESH	REQ	08-29-2012	3	EA	6.3000	18.90
	1301100	80-80675	VEST, MESH	REQ	08-29-2012	3	EA	6.3000	18.90
	1301105	18-36800	TRASH BAG	REQ	08-29-2012	1	CS	21.0471	21.05
	1301105	18-37000	TRASH BAG	REQ	08-29-2012	1	CS	28.2988	28.30
054	1301109	52-02150	CONTROLLER, NEW	REQ	08-30-2012	1	EA	3,784.4286	3,784.43
054	1301109	52-10000	ISOLATOR	REQ	08-30-2012	2	EA	39.0000	78.00
054	1301109	52-12090	LOAD PACK	REQ	08-30-2012	2	EA	33.9982	68.00
054	1301109	52-22010	SIGNAL HEAD	REQ	08-30-2012	2	EA	385.9500	771.90
054	1301109	52-22075	SIGNAL HEAD	REQ	08-30-2012	4	EA	589.1975	2,356.79
	1301175	80-80625	VEST, MESH	RTN	09-05-2012	3-	EA	6.3000	18.90-
	1301175	80-80675	VEST, MESH	RTN	09-05-2012	3-	EA	6.3000	18.90-
	1301176	80-79900	VEST, ADOPT HWY	REQ	09-05-2012	6	EA	3.8526	23.12
	1301201	85-14100	POST DELINEATOR	REQ	09-07-2012	400	EA	4.5900	1,836.00
	1301226	70-40480	PAPER	REQ	09-07-2012	100	RM	3.2181	321.81
054	1301353	52-02015	CONTROLLER, NEW	REQ	09-17-2012	1	EA	1,899.2200	1,899.22
054	1301353	52-02140	CONTROLLER, NEW	REQ	09-17-2012	1	EA	3,750.0000	3,750.00
054	1301353	52-02142	CONTROLLER,SWAR	REQ	09-17-2012	1	EA	425.7921	425.79
054	1301353	52-03080	DETECTOR	REQ	09-17-2012	3	EA	92.9500	278.85
054	1301353	52-03085	DETECTOR	REQ	09-17-2012	4	EA	268.0000	1,072.00
054	1301353	52-10000	ISOLATOR	REQ	09-17-2012	1	EA	39.0000	39.00
054	1301353	52-12090	LOAD PACK	REQ	09-17-2012	6	EA	33.9982	203.99
	1301399	18-56000	TOWEL, PAPER	REQ	09-19-2012	1	CS	14.1107	14.11
	1301470	12-08525	OIL, MOTOR	REQ	09-25-2012	1	DR	439.9750	439.98
	1301470	12-08541	OIL, MOTOR	REQ	09-25-2012	2	DR	451.0000	902.00
	1301476	60-00200	COLD PATCH	REQ	09-25-2012	63	BG	8.0000	504.00
	1301485	52-17131	PHOTO ELEC.CONT	REQ	09-25-2012	4	EA	15.7632	63.05
	1301487	18-36900	TRASH BAG	REQ	09-25-2012	6	CS	21.0514	126.31
	1301487	18-57000	TOWEL, PAPER	REQ	09-25-2012	8	CS	18.6952	149.56
	1301487	18-59000	RAG WIPING	REQ	09-25-2012	3	BX	16.0000	48.00
	1301487	80-28080	GLOVES, LEATHER	REQ	09-25-2012	12	PR	3.8691	46.43
	1301487	80-29400	GLOVES, LEATHER	REQ	09-25-2012	12	PR	4.7319	56.78

NDOR SUPPLY INVENTORY SYSTEM
REQUISITIONS/RETURNS EXPENSE REPORT BY OE
FOR PERIOD: 08-29-2012 THRU: 09-25-2012

ORGANIZATION CODE: 904 TITLE: ADMINSTRATIVE

RDO CALL NUMBER	REQ NUMBER	CLASS & STOCK NO	KEYWORD	REQ TYP	SHIPPED DATE	QUANTITY SHIPPED	U/M	AVERAGE PRICE	TOTAL AMOUNT
	1301488	18-56000	TOWEL, PAPER	REQ	09-25-2012	4	CS	14.1107	56.44

TOTAL REQUISITIONS: 20,508.71
TOTAL RETURNS : 37.80-

ORGANIZATION TOTAL: 20,470.91

DATE: 05-29-13
SUPB230

NDOR SUPPLY INVENTORY SYSTEM
PURCHASE ORDERS RECEIVED REPORT
FOR PERIOD: 04-25-2013 THRU: 05-28-2013

PURCHASE ORDER NO	CLASS & STOCK NO	KEY WORD	P/O TYPE	DATE RECEIVED	QUANTITY RECEIVED	U/M	FINAL/CANCEL PARTIAL CODE	DOLLAR AMOUNT
0458247	10-07700	POST MAIL BOX	DOR	05-14-2013	400	EA	F	1,548.00
0458247	10-07800	POST MAIL BOX	DOR	05-14-2013	400	EA	F	1,548.00
					PURCHASE ORDER 0458247 TOTAL:			3,096.00
0466427	85-89710	POST SIGN	DOR	05-09-2013	1,200	EA	F	8,808.00
0466427	85-89796	POST SIGN	DOR	05-09-2013	1,200	EA	F	26,856.00
					PURCHASE ORDER 0466427 TOTAL:			35,664.00
0466429	85-89730	POST SIGN	DOR	05-02-2013	60	EA	F	5,505.00
					PURCHASE ORDER 0466429 TOTAL:			5,505.00
0467248	80-80550	VEST, MESH	DOR	05-01-2013	25	EA	F	157.50
0467248	80-80640	VEST, MESH	DOR	05-01-2013	40	EA	F	252.00
					PURCHASE ORDER 0467248 TOTAL:			409.50
0467804	85-89740	POST SIGN	DOR	05-02-2013	50	BX	F	4,422.00
					PURCHASE ORDER 0467804 TOTAL:			4,422.00
0469210	85-89745	POST SIGN	DOR	05-02-2013	150	BG	F	2,358.00
					PURCHASE ORDER 0469210 TOTAL:			2,358.00
0470241	70-40482	PAPER	DOR	04-30-2013	55	RM	F	248.33
					PURCHASE ORDER 0470241 TOTAL:			248.33
0470245	60-00200	COLD PATCH	DOR	05-01-2013	882	BG	F	7,056.00
					PURCHASE ORDER 0470245 TOTAL:			7,056.00
0470246	60-00200	COLD PATCH	DOR	04-30-2013	882	BG	F	7,056.00
					PURCHASE ORDER 0470246 TOTAL:			7,056.00
0470247	18-36800	TRASH BAG	DOR	05-03-2013	10	CS	F	208.70
					PURCHASE ORDER 0470247 TOTAL:			208.70
0470349	85-89730	POST SIGN	DOR	05-02-2013	50	EA	F	4,587.50
					PURCHASE ORDER 0470349 TOTAL:			4,587.50
0470647	70-40484	PAPER	DOR	04-25-2013	80	RM	P	568.00
0470647	70-40484	PAPER	DOR	04-30-2013	70	RM	F	497.00
					PURCHASE ORDER 0470647 TOTAL:			1,065.00

NDOR SUPPLY INVENTORY SYSTEM
PURCHASE ORDERS RECEIVED REPORT
FOR PERIOD: 04-25-2013 THRU: 05-28-2013

PURCHASE ORDER NO	CLASS & STOCK NO	KEY WORD	P/O TYPE	DATE RECEIVED	QUANTITY RECEIVED	U/M	FINAL/CANCEL PARTIAL CODE	DOLLAR AMOUNT
3261610	85-44000	DELINEATOR	DOR	05-15-2013	1,600	EA	F	2,324.80
					PURCHASE ORDER 3261610 TOTAL:			2,324.80
3261636	86-80475	SIGN	DOR	04-30-2013	25	EA	F	1,210.00
					PURCHASE ORDER 3261636 TOTAL:			1,210.00
3261637	52-10000	ISOLATOR	DOR	05-01-2013	40	EA	F	1,680.00
					PURCHASE ORDER 3261637 TOTAL:			1,680.00
3261646	85-96600	WASHER	DOR	04-25-2013	15	C	F	30.45
					PURCHASE ORDER 3261646 TOTAL:			30.45
3261647	52-03085	DETECTOR	DOR	04-29-2013	20	EA	F	5,500.00
					PURCHASE ORDER 3261647 TOTAL:			5,500.00
3261648	85-35400	PAVEMENT MARKER	DOR	04-29-2013	500	EA	F	550.00
					PURCHASE ORDER 3261648 TOTAL:			550.00
3261660	86-50320	SIGN	DOR	04-30-2013	760	EA	P	2,128.00
3261660	86-50320	SIGN	DOR	05-21-2013	19	EA	F	53.20
3261660	86-50320	SIGN	DOR	05-20-2013	401	EA	P	1,122.80
					PURCHASE ORDER 3261660 TOTAL:			3,304.00
3261663	52-03080	DETECTOR	DOR	05-09-2013	20	EA	F	1,919.00
					PURCHASE ORDER 3261663 TOTAL:			1,919.00
3261665	85-89501	POST SIGN	DOR	05-15-2013	18	EA	F	2,107.01
					PURCHASE ORDER 3261665 TOTAL:			2,107.01
3261672	12-00575	ANTIFREEZE,DRUM	DOR	05-15-2013	12	DR	F	385.50
					PURCHASE ORDER 3261672 TOTAL:			385.50
3261681	86-03600	SIGN	DOR	05-03-2013	100	EA	F	160.00
3261681	86-50030	SIGN	DOR	05-03-2013	50	EA	F	2,020.00
3261681	86-50300	SIGN	DOR	05-03-2013	100	EA	F	1,940.00
					PURCHASE ORDER 3261681 TOTAL:			4,120.00
3261692	10-07600	NUT	DOR	04-25-2013	25	C	F	117.80
					PURCHASE ORDER 3261692 TOTAL:			117.80

NDOR SUPPLY INVENTORY SYSTEM
PURCHASE ORDERS RECEIVED REPORT
FOR PERIOD: 04-25-2013 THRU: 05-28-2013

PURCHASE ORDER NO	CLASS & STOCK NO	KEY WORD	P/O TYPE	DATE RECEIVED	QUANTITY RECEIVED	U/M	FINAL/CANCEL PARTIAL CODE	DOLLAR AMOUNT
3262635	45-19680	WAFER FILLER	DOR	04-29-2013	1,400	EA	F	9,109.80
					PURCHASE ORDER 3262635 TOTAL:			9,109.80
3262636	24-48625	SHOVEL, DIRT	DOR	05-02-2013	11	EA	F	265.10
					PURCHASE ORDER 3262636 TOTAL:			265.10
3262637	45-13610	STROBE LIGHT	DOR	05-10-2013	40	EA	F	3,520.00
					PURCHASE ORDER 3262637 TOTAL:			3,520.00
3262638	80-67100	ADAPTER	DOR	05-06-2013	30	EA	F	680.70
					PURCHASE ORDER 3262638 TOTAL:			680.70
3262640	80-20340	COVERALL	DOR	05-07-2013	12	EA	F	182.88
					PURCHASE ORDER 3262640 TOTAL:			182.88
3262641	80-27020	FIRST AID KIT	DOR	05-07-2013	30	EA	P	539.70
					PURCHASE ORDER 3262641 TOTAL:			539.70
3262643	16-19100	PAINT	DOR	05-03-2013	32	GL	F	1,197.76
					PURCHASE ORDER 3262643 TOTAL:			1,197.76
3262644	24-35900	HOSE, BREAKAWAY	DOR	05-15-2013	12	EA	F	1,020.00
					PURCHASE ORDER 3262644 TOTAL:			1,020.00
3262646	58-08600	SAMPLE, CAN	DOR	05-14-2013	400	EA	F	988.00
					PURCHASE ORDER 3262646 TOTAL:			988.00
3262647	12-06000	FLUID, DIESEL	DOR	05-09-2013	80	BX	F	1,368.40
					PURCHASE ORDER 3262647 TOTAL:			1,368.40
3262649	58-37000	SAMPLE, JAR LID	DOR	05-13-2013	500	EA	F	11,000.00
					PURCHASE ORDER 3262649 TOTAL:			11,000.00
3262650	45-12180	BOLT BLADE	DOR	05-15-2013	12	EA	F	190.22
					PURCHASE ORDER 3262650 TOTAL:			190.22
3290341	70-09900	ENVELOPE	DAS	04-29-2013	21	BX	F	853.65
3290341	70-11820	ENVELOPE	DAS	04-29-2013	21	BX	F	826.35
					PURCHASE ORDER 3290341 TOTAL:			1,680.00
					GRAND TOTAL:			231,517.47

PURCHASE ORDER NO	CLASS & STOCK NO	KEY WORD	P.O. TYPE	DATE ORDERED	DATE DUE IN	QUANTITY ORDERED	U/M	ITEM COST
	80-80640	VEST, MESH	DOR	04-04-2013	05-03-2013	40	EA	252.00
						P.O. TOTAL		252.00
0467804	85-89740	POST SIGN	DOR	04-08-2013	05-31-2013	50	BX	4,422.00
						P.O. TOTAL		4,422.00
0468741	80-17640	CAP, BASEBALL	DOR	04-15-2013	05-13-2013	288	EA	2,131.20
						P.O. TOTAL		2,131.20
0469210	85-89745	POST SIGN	DOR	04-16-2013	05-15-2013	150	BG	2,358.00
						P.O. TOTAL		2,358.00
0470187	10-07700	POST MAIL BOX	DOR	04-22-2013	05-31-2013	400	EA	1,548.00
						P.O. TOTAL		1,548.00
	10-07800	POST MAIL BOX	DOR	04-22-2013	05-31-2013	400	EA	1,548.00
						P.O. TOTAL		1,548.00
0470241	70-40482	PAPER	DOR	04-22-2013	05-07-2013	55 BO	RM	220.83
						P.O. TOTAL		220.83
0470245	60-00200	COLD PATCH	DOR	04-22-2013	05-07-2013	882	BG	7,056.00
						P.O. TOTAL		7,056.00
0470246	60-00200	COLD PATCH	DOR	04-22-2013	05-07-2013	882	BG	7,056.00
						P.O. TOTAL		7,056.00
0470247	18-36800	TRASH BAG	DOR	04-22-2013	05-07-2013	10	CS	208.70
						P.O. TOTAL		208.70
0470345	85-14100	POST DELINEATOR	DOR	04-24-2013	05-31-2013	4,000	EA	18,360.00
						P.O. TOTAL		18,360.00

NDOR SUPPLY INVENTORY SYSTEM
OUTSTANDING PURCHASE ORDER REPORT

PURCHASE ORDER NO	CLASS & STOCK NO	KEY WORD	P.O. TYPE	DATE ORDERED	DATE DUE IN	QUANTITY ORDERED	U/M	ITEM COST
3262632	80-18000	CLOTH	DOR	04-17-2013	04-26-2013	4	RL	464.00
						P.O. TOTAL		464.00
3262633	24-09400	CASTER	DOR	04-22-2013	05-07-2013	20	EA	597.80
						P.O. TOTAL		597.80
3262635	45-19680	WAFER FILLER	DOR	04-23-2013	05-15-2013	1,400	EA	9,125.20
						P.O. TOTAL		9,125.20
3262636	24-48625	SHOVEL, DIRT	DOR	04-22-2013	05-07-2013	11 BO	EA	265.10
						P.O. TOTAL		265.10
3262637	45-13610	STROBE LIGHT	DOR	04-23-2013	05-15-2013	40	EA	3,520.00
						P.O. TOTAL		3,520.00
3262638	80-67100	ADAPTER	DOR	04-24-2013	05-07-2013	30	EA	680.70
						P.O. TOTAL		680.70
3262640	80-20340	COVERALL	DOR	04-24-2013	05-20-2013	12	EA	182.88
						P.O. TOTAL		182.88

TOTAL OUTSTANDING 283,855.33

DATE: 04-25-13
SUPB290

NDOR SUPPLY INVENTORY SYSTEM
CLASS-STOCK PRODUCTS ADDED & DELETED REPORT
FOR PERIOD: 03-27-2013 THRU: 04-24-2013

ADD/ DEL	CLASS & STOCK NO	KEY WORD	U/M	PRODUCT DESCRIPTION	UPDATE ID	UPDATE DATE
ADD	58-24000	SECURITY SEAL	EA	HEAVY DUTY PLASTIC SEALS	DR11026	04-22-2013
DEL	58-17200	NAIL, MASONRY	BX	PARKER-KALFON 1/4" X 2 1/2" GALVANIZED 100 PER BX	DR19042	04-11-2013
DEL	58-21100	ROD FIBERGLASS	EA	MOUNDS CITY STANDARD ENGLISH, 25FT, 10THS/100THS	DR19042	04-17-2013
DEL	60-00116	BOX, PACKING	EA	6" X 6" X 6", CARDBOARD	DR19042	04-22-2013
DEL	86-00103	SIGN	EA	FUEL SYMBOL	DR11026	04-22-2013
DEL	86-02143	SIGN	EA	DIVIDED HWY SYMBOL 48X48 YELLOW	DR11026	04-22-2013
DEL	86-02200	SIGN	EA	CONTROLLED ACCESS HWY 24X24	DR11026	04-04-2013
DEL	86-02203	SIGN	EA	TRUCK 24X12	DR11026	04-22-2013
DEL	86-02207	SIGN	EA	ALT 24X12	DR11026	04-22-2013
DEL	86-02210	SIGN	EA	ALTERNATE 24X12	DR11026	04-22-2013
DEL	86-06001	SIGN	EA	NO HWY LITTERING 48X48	DR11026	04-04-2013
DEL	86-06016	SIGN	EA	BUCKLE UP/HELMET LAW 60X48	DR11026	04-22-2013
DEL	86-07017	SIGN	EA	VEHICLE TOWING MOBILE HOME 36X36	DR11026	04-22-2013
DEL	86-48050	SIGN	EA	SPEED LIMIT 50 MPH 48X60	DR11026	04-04-2013
DEL	86-50405	SIGN	EA	BRIDGE MAY BE ICY 48X48 HINGED	DR11026	04-22-2013
DEL	86-60019	SIGN	EA	WHEEL CHAIR SYMBOL	DR11026	04-22-2013
DEL	86-90410	SIGN	EA	2 HEAD STRAIGHT - SLANT RIGHT (WHITE) 21X15	DR11026	04-22-2013

10

```
          JOB
          NUM        YEARLY BATCH JOB SUBMITTAL SELECTIONS
          === ================================================

           81 SALES DOLLARS BY CLASS REPORT                          SUPB300
              SELECT BY FROM/THRU DATES

           82 STOCK PRODUCTS NOT ISSUED SINCE REPORT                 SUPB310
              SELECT BY NOT ISSUED SINCE DATE

           83 CLASS-STOCK PRODUCTS ADDED/DELETED REPORT              SUPB290
              SELECT BY FROM/THRU DATES




 JOB SELECTION:
 DATES (M-D-Y)    FROM:              THRU:


 PRINTER SELECTION: 2297

PF1 =JOBMENU PF2 =         PF3 =SUPMENU PF4 =         PF5 =         PF6 =
PF7 =DAILY   PF8 =WEEKLY   PF9 =MONTHLY PF10=YEARLY  PF11=PHY INV PF12=CLEAR

ENTER JOB SELECTION - PRESS ENTER
```

DATE: 06-18-14
SUPB180

NDOR SUPPLY INVENTORY SYSTEM
YEARLY PERIOD END TABLE UPDATES

NUMBER OF INVENTORY MASTER RECORDS READ	1,021
NUMBER OF INVENTORY MASTER RECORDS UPDATED	1,021

DATE: 06-18-14
SUPB300

NDOR SUPPLY INVENTORY SYSTEM
SALES DOLLARS BY CLASS
FOR PERIOD: 06-19-2013 THRU: 06-17-2014

CLASS	SALES DOLLARS
10	149,857.26
12	199,156.76
16	24,910.15
18	180,793.58
24	66,586.13
45	1,395,304.76
50	12,067.30
52	229,846.50
58	88,553.01
60	156,227.51
70	102,845.72
80	167,026.26
85	918,151.87
86	706,000.49
TOTAL	4,397,327.30

NDOR SUPPLY INVENTORY SYSTEM
STOCKED PRODUCTS NOT ISSUED SINCE 06-19-2013

CLASS & STOCK NO	KEY WORD	U/M	PART NUMBER	PRODUCT DESCRIPTION	DATE LAST ISSUED	QTY ON HAND	LOCATION
10-01000	BOLT GUARD RAIL	EA	F-3 (11/4")	5/8" X 1 1/4" BUTTON HEAD BOLT & RECESS NUT	05-20-2013	275	101-0F-00-078
10-21055	POST GUARD RAIL	EA		STEEL W6" X 4" X 6', 8.5LB	06-17-2013	69	107-0C-02-006
12-55900	PUMP GAS	EA	9152Q	W/METER 3/4 HP 10 GPM GASBOY	07-06-2010	3	101-0G-FL-009
24-18000	BIT JACK HAMMER	EA	BOSH S2167	ASPHALT CUTTER 6" X 1 1/8" HEX SHANK, BOSH S2167	08-17-2012	7	101-0F-00-071
24-35500	HOSE, WHIP	EA		3/4" X 8" FOR GAS PUMPS	03-12-2013	5	101-0F-00-066
24-49000	CLAMP CABLE	EA	TO BE DELETE	GALVANIZED 5/16" FOR WIRE ROPE	03-22-2013	62	101-0F-00-063
24-49200	CLAMP CABLE	EA	TO BE DELETE	GALVANIZED 3/8" FOR WIRE ROPE	03-01-2013	34	101-0F-00-119
24-49600	CLAMP CABLE	EA	TO BE DELETE	GALVANIZED 1/2" FOR WIRE ROPE, 50/PK	03-08-2013	25	101-0F-00-065
24-50000	CLAMP CABLE	EA	TO BE DELETE	GALVANIZED 5/8" FOR WIRE ROPE, 25/PK	03-01-2013	31	101-0F-00-057
52-04050	FLASHER	EA		2 CIR IN METAL CABINET	04-11-2013	3	101-0G-03-202
52-04100	FLASHER	EA		2 CIRCUIT METAL CABINET, TIME CLOCK	08-06-2012	2	101-0G-05-201
52-17134	WASHER	ST		RECT GALV STEEL, 4/SET (FOR TB1-17 MOD)	05-07-2013	47	105-0B-04-302
52-33110	TRANS BASE,USED	EA		TB1-20 11"-13" BC TOP, 13"-15" BC BOTTOM	05-16-2013	3	109-0A-01-005
52-33460	LUMINAIRE USED	EA		LUMINAIRE 1000 WATT HPS OFFSET	04-29-2013	5	106-0A-03-003
52-33610	COVERS NUT USED	KT	2127	4 NUT COVERS/KIT SOME DRILLING REQUIRED	04-20-2012	19	105-0B-04-401
52-40002	POLE LIGHT USED	EA		POLE SHAFT 10' 4"X4" BLACK FOR REST	10-23-2012	12	107-0E-01-006
52-40115	POLE LIGHT USED	EA		35' 12-131/2 BC 30" SIMPLEX W/12'MASTARM	05-28-2013	2	109-0A-02-000
52-40120	POLE LIGHT USED	EA		POLE SHAFT 45' 12 1/2"-13 1/2" BC TENON TOP	12-18-2012	29	109-0A-03-001
58-01460	BAG, PAPER	BD		NO 8 EXTRA HEAVY DUTY 6 1/2" X 12 1/2" 500/BD	05-22-2012	3	103-0A-05-010
58-08650	DRIVER REBAR	EA	SHOP JOB	FOR DRIVING 5/8" REBAR (SHOP JOB)	05-16-2013	7	101-0F-00-115
60-00100	BOX, PACKING	EA		4"X4"X4", CARDBOARD	06-12-2013	50	101-0J-02-203
70-11975	ENVELOPE, POLY	FA		7" X 5 1/2" BACK LOADING (FOR PACKING SLIP)	10-28-2011	47	103-0A-08-026
70-45675	PAPER, LTR HEAD	PK		DOR LETTER HEAD W/DIST 6 RETURN ADDRESS 100 PER PK	08-06-2012	4	103-0A-10-018
70-45690	PAPER, LTR HEAD	PK		DOR LETTER HEAD W/DIST 8 RETURN ADDRESS 100 PER PK	08-21-2012	2	103-0A-10-019
70-60927	PLAN BAG	EA		5 3/8" X 3 5/8" X 38" MAILING FOR ROLLS OF PLANS	03-15-2013	125	103-0A-12-030
70-89010	FORM-ORM	PK	4-02-21	OFC OF RISK MGT VEHICLE ACCIDENT REPORT 25ST/PK	08-10-2007	12	103-0A-11-029
70-89210	FORM DR-169	PD	TO BE DELETE	JUL 06 FORKLIFT OPERATOR'S CHECKLIST	12-02-2011	21	103-0A-11-019
80-11000	RAIN SUIT	EA	NO-RE-ORDER	RAIN SUIT, JACKET SMALL W/REFLECTIVE	02-05-2013	4	103-0A-11-015
80-11006	RAIN SUIT	EA	NO-RE-ORDER	RAIN SUIT, PANTS SMALL W/REFLECTIVE	02-05-2013	9	103-0A-11-016
80-17850	CHINSTRAP	EA	WILLSON HC42	FOR V-GUARD MSA HELMET	05-01-2013	18	103-0A-06-011
80-20325	COVERALL	PR	TO BE DELETE	MED WHITE ZIP FRONT TYVEK CHEMICAL RESISTANT 12/BX	12-12-2012	3	103-0A-03-035
80-20340	COVERALL	EA		4XL, WHITE ZIP FRONT TYVEK CHEM RESISTANT 12/BX	04-25-2013	21	103-0A-01-030
80-20350	COVERALL	PR	KLP77417	LRG WHITE ZIP FRONT TYVEK CHEMICAL RESISTANT 12/BX	12-06-2012	7	103-0C-04-017
80-27900	GLOVES, RUBBER	PR	EDMONT 29-86	BLACK RUBBER HD LONG MED SZ 9 (TREAT PLANT/CHEM)	05-20-2013	12	103-0B-01-029
80-31500	HARD HAT ADAPTR	KT	WILLSON HC34	FOR KWIP KLIP HEADGEAR, FOR SLOTTED V-GARD HELMET	10-15-2012	12	103-0A-06-015

NDOR SUPPLY INVENTORY SYSTEM
CLASS-STOCK PRODUCTS ADDED & DELETED REPORT
FOR PERIOD: 06-19-2013 THRU: 06-17-2014

ADD/ DEL	CLASS & STOCK NO	KEY WORD	U/M	PRODUCT DESCRIPTION	UPDATE ID	UPDATE DATE
ADD	58-00900	SAMPLE, CAN	EA	1/2 GALLON, METAL, WITH LID	DR11026	05-21-2014
ADD	60-00900	BOX, PACKING	EA	7"X5"X8 1/2" CARDBOARD	DR11026	05-21-2014
ADD	80-28280	GLOVES, NITRILE	BX	DISPOSABLE NITRILE, 2XL, 50/BX	DR11026	07-25-2013
ADD	86-00002	SIGN	EA	HONOR TO THE VETERANS	DR11026	05-12-2014
ADD	86-11111	SIGN	EA	DRINKING WATER PROTECTION 30X36	DR11026	01-29-2014
ADD	86-11112	SIGN	EA	DRINKING WATER PROTECTION 24X30	DR11026	01-29-2014
DEL	10-07410	BOLT	BX	5/16"X21/4" FRANKLIN BOLT KIT 200/BX	DR11026	08-21-2013
DEL	10-13500	POST FENCE	EA	END WOOD TREATED ROUND 6"X8'	DR19042	10-02-2013
DEL	12-08417	OIL, GEAR	DR	SAE 85W-140 MULTI-PURPOSE 120 LB DRUM (16 GALLON)	DR11026	01-29-2014
DEL	12-08522	OIL, MOTOR	CS	SAE 5W30 API/SM 6/CS	DR19042	02-03-2014
DEL	16-01000	FERTILIZER	BG	FOR SEEDING SPRING & FALL 16-48-0 OR 18-46-0 50LB/	DR19042	03-03-2014
DEL	16-19000	PAINT	GL	ORANGE LEAD FREE DUPONT CENTARI LF31A	DR19042	04-11-2014
DEL	16-26200	PAINT	GL	LEAD FREE BUTTERSCOTCH IMRON 5000 (04-07 STERLING)	DR19042	04-14-2014
DEL	16-41375	TRICHLOR	DR	OETHYLENE TECH GRADE 30 GL DRUM TEST LAB ONLY	DR19042	07-02-2013
DEL	16-41425	DRUM	DR	NEW 17E 55GL (18GA) FOR USED TCE BLK/W/WH TOP	DR19042	07-09-2013
DEL	45-13621	STROBE LIGHT	EA	SELF CONTAINED, 12V CLEAR	DR11026	12-17-2013
DEL	45-18140	CHAIN TIRE	FT	CROSS CHAIN TWIST LINK 5/16	DR19042	09-25-2013
DEL	45-18360	CHAIN TIRE	PR	11.00-22, 12.00-20, 12-24.5 (NACM 2255)	DR11026	12-17-2013
DEL	52-01230	BULB	EA	USE FOR 8" WARNING & WALK, DON'T WALK PEDEST HEADS	DR19042	03-10-2014
DEL	52-01240	BULB	EA	USE FOR ALL RED & GRN 12" VEH HEADS EXCEPT CTR BLK	DR19042	03-10-2014
DEL	52-02025	CONTROLLER,USED	EA	USED TRAFFIC SIGNAL	DR19042	05-12-2014
DEL	52-02145	CONTROLLER,USED	EA	USED TRAFFIC SIGNAL	DR19042	05-12-2014
DEL	52-13100	FIXTURE, LIGHT	EA	HUBBELL, KEMLUX KS, 35 WATT HPS, 120 VOLT	DR19042	03-20-2014
DEL	52-14000	MOUNTING	EA	ASSY SINGLE HEAD FOR 4 1/2" OD PEDESTAL POLE	DR19042	03-10-2014
DEL	52-16025	PED POLE	ST	ANCHOR BOLTS, 3/4", W/WASHERS AND NUTS, SET OF 4	DR11026	01-27-2014
DEL	52-29010	VISOR	EA	8" TUNNEL TYPE	DR19042	03-10-2014
DEL	52-33330	FOUND PWR USED	EA	SCREW IN FOUNDATION 6'	DR11026	09-23-2013
DEL	52-33420	LUMINAIRE USED	EA	250 WATT HPS W/FLAT LENS & RECEPTICLE FOR P.C.	DR19042	03-26-2014
DEL	52-33470	LUMINAIRE USED	EA	400 WATT POWER SPOT LIGHT	DR19042	03-20-2014
DEL	52-40005	POLE LIGHT, NEW	EA	POLE SHAFT 40', 13.5" BC, W/6' SINGLE MAST ARM	DR19042	03-20-2014
DEL	52-40010	POLE LIGHT USED	EA	POLE 27', BC 27" SIMPLEX	DR19042	03-20-2014
DEL	52-40030	POLE LIGHT USED	EA	POLE 33', BC 27" SIMPLEX 13 1/2 BC	DR11026	03-25-2014
DEL	52-40035	POLE LIGHT USED	EA	POLE SHAFT 33'-7", 27' SIMPLEX W/MAST ARM	DR11026	03-25-2014

NDOR SUPPLY INVENTORY SYSTEM
CLASS-STOCK PRODUCTS ADDED & DELETED REPORT
FOR PERIOD: 06-19-2013 THRU: 06-17-2014

ADD/ DEL	CLASS & STOCK NO	KEY WORD	U/M	PRODUCT DESCRIPTION	UPDATE ID	UPDATE DATE
DEL	86-50000	SIGN	EA	HORIZONTAL ALIGNMENT LEFT TURN 30X30	DR11026	09-23-2013
DEL	86-50020	SIGN	EA	HORIZONTAL ALIGNMENT RIGHT TURN 30X30	DR19042	04-01-2014
DEL	86-60003	SIGN	EA	1/2 MILE BLUE	DR19042	02-26-2014
DEL	86-60030	SIGN	EA	FRESH OIL ORANGE 30X30	DR11026	09-05-2013
DEL	86-60050	SIGN	EA	UNEVEN LANES YELLOW	DR11026	08-30-2013
DEL	86-90050	SIGN	EA	EAST (BLUE) 24X12	DR11026	12-30-2013
DEL	86-90110	SIGN	EA	TO (BLUE) 24X12	DR11026	11-12-2013

COST ACCOUNTING REPORTS
CSTEOM3 REQUEST FORM

```
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58

//STEP EXEC CSTEOM3,DATE='201306',TOTALS='20130600329999.26
                          CCYYMM             CCYYMM
```

BUSINESS DATE
COLS 27 - 32

BUSINESS DATE
COLS 43 - 48

TOTAL AMOUNT
COLS 49 - 59

APPENDIX M

Z:\DevData\NON-APS\ppm\Run sheets\csteom3.doc

NEBRASKA DEPARTMENT OF ROADS
ACCOUNTS PAYABLE - SUPPLY INVENTORY SYSTEM

TRANS CODE	P.O. NUMBER	RETURNED GOODS NO.	BATCH NO.	CLASS & STOCK NO.	AMOUNT	VOUCHER NUMBER	VOUCHER AMOUNT	LIQUIDATION IS COMPLETE	NET PAYABLE	DIFFERENCE
	0444077					0545499	22500.00			
TOTAL	0444077						22500.00	YES	22500.00-	22500.00-
	0458268					0548384	1073.00			
	0458268					0548384	164.50-			
06	0458268			18 36900	908.50					
TOTAL	0458268				908.50		908.50	YES		
06	0462157			85 14100	22950.00					
TOTAL	0462157				22950.00			NO	22950.00	
	0463491					0548385	1073.00			
	0463491					0548385	164.50-			
06	0463491			18 36900	908.50					
TOTAL	0463491				908.50		908.50	YES		
	0463498					0548386	246.50			
	0463498					0548386	37.80-			
06	0463498			18 36800	208.70					
TOTAL	0463498				208.70		208.70	YES		
	0464187									
06	0464187			80 17645	2116.40	0548219	2116.40			
TOTAL	0464187				2116.40		2116.40	YES		
06	0466431			85 89553	553.00					

TRANS CODE	P.O. NUMBER	RETURNED GOODS NO.	BATCH NO.	CLASS & STOCK NO.	AMOUNT	VOUCHER NUMBER	VOUCHER AMOUNT	LIQUIDATION IS COMPLETE	NET PAYABLE	DIFFERENCE
TOTAL	0466431				553.00			NO	553.00	
	0468741					0548845	2146.00			
06	0468741			80 17640	2146.00					
TOTAL	0468741				2146.00		2146.00	YES		
	0470241					J306020	10.00-			
	0470241					0546395	90.30			
	0470241					0546395	248.33			
06	0470241			70 40482	248.33					
06	0470241			70 40482	80.30					
TOTAL	0470241				328.63		328.63	YES		
	0470246					0547867	7056.00			
06	0470246			60 00200	7056.00					
TOTAL	0470246				7056.00		7056.00	YES		
	0470773					0548387	1597.00			
06	0470773			18 36850	1597.00					
TOTAL	0470773				1597.00		1597.00	YES		
	0472280					0548838	7340.00			
06	0472280			85 89710	7340.00					
TOTAL	0472280				7340.00		7340.00	YES		
	0472282					0548839	3120.00			
06	0472282			85 10220	3120.00					

NOTE: When the user opens the application, they are verified by Active Directory. The first thing they should see is what is shown below.

Welcome Teresa, select a location

- (●) Beatrice (selected)
- ( ) Dorchester
- ( ) Fairbury
- ( ) Pawnee City

[Review Orders] [Create Order] [Return ▼]

- Damaged
- Surplus
- Solvent
- Other

NOTE: We will have external customers as well who are limited on what they can order.

Welcome, you are placing an order for;

LANCASTER COUNTY

[Review Orders] [Create Order]

APPENDIX N

Class Code 85

Stock Number 43200

Item Name 85

Description

Separate descriptions with commas

Testing Required ○ Yes ○ No

Account Code 4344

Activity 1 4211 Activity 2 4212

Min. Balance 1500 Max. Balance 3000

Item Location 1060B09103

Beginning Year Quantity

Quantity Issued This Year

Quantity Issued Last Year

Average Unit Price

Total Value

Save Changes Print Bin Label

search

0 Cart

- Construction and Maintenance Materials
- Vehicle fluids, Lubricants and Related Items
- Chemicals, paints and Agricultural Items
- Janitorial Supplies
- Hardware, hand Tools and Miscellaneous Items
- Seasonal Equipment Replacement Parts and Accessories
- Electrical Supplies
- Signal and Lighting Materials
- Laboratory, Surveying and Engineering Equipment
- Operating and Maintenance Supplies
- Paper, Forms and Office Supplies
- Safety and Medical Supplies
- Highway Sign Materials and pavement Markers
- Roads Signs
- Capital Assets

ITEM		DESCRIPTION	ON HAND	QUANTITY
Oil Spill Kit		Kaddie, With Contents	5	1
Sock Absorbent		Sock Oil Absorbent 12 per box	10	0
Mat Top Barrel		Mat, 55 Gallon 25 per box	10	3
Antifreeze		50/50 Premix Ext Life for Light and	8	3
Washer Fluid		Windshield Washer, All Season 6 Gallons per case	4	6
Transmission Fluid		CS Automatic, 5 Gallon	20	3
Hydraulic Fluid		DR 55 Gallon	5	3

NOTE: Click or hover on the picture and the full size version should pop-up.

Proceed to Checkout

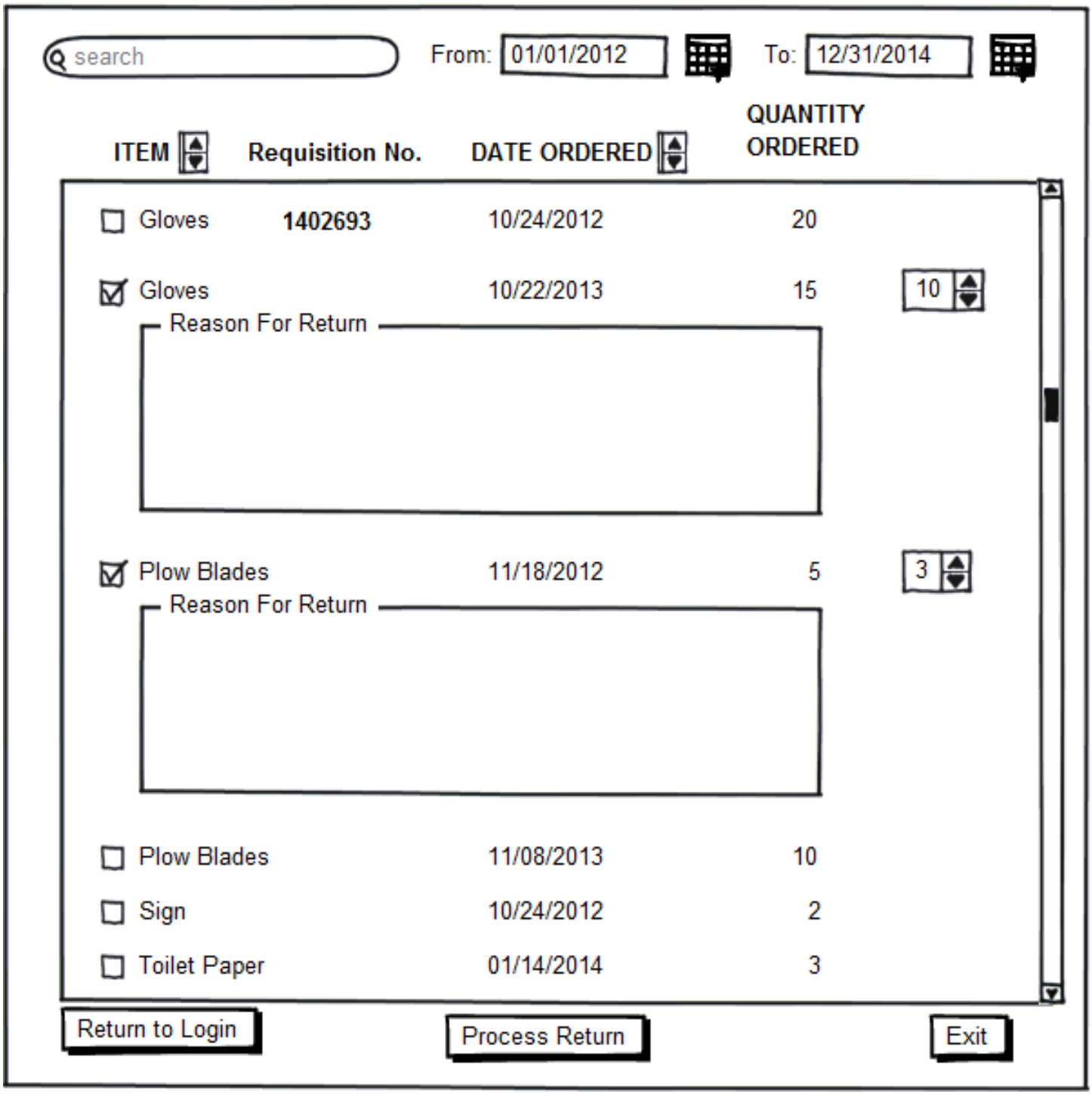
APPENDIX N

ITEM	DESCRIPTION	QUANTITY	Activity
Oil Spill Kit	Kaddie, With Contents	1	4382
Sock Absorbent	Sock Oil Absorbent 12 per box	0	4221
Mat Top Barrel	Mat, 55 Gallon 25 per box	3	4385
Antifreeze	50/50 Premix Ext Life for Light and	3	4382
Washer Fluid	Windshield Washer, All Season 6 Gallons per case	6	4382
Transmission Fluid	CS Automatic, 5 Gallon	3	4382
Hydraulic Fluid	DR 55 Gallon	3	4382
Diesel Fluid	BX Diesel Exhaust Fluid 2 per box	3	4382

Continue Shopping

Submit Order

APPENDIX N


search
From: 01/01/2012
To: 12/31/2014
ITEM
Requisition No.
DATE ORDERED
QUANTITY ORDERED
Gloves 1402693 10/24/2012 20
Gloves 10/22/2013 15 10
Reason For Return
Plow Blades 11/18/2012 5 3
Reason For Return
Plow Blades 11/08/2013 10
Sign 10/24/2012 2
Toilet Paper 01/14/2014 3
Return to Login
Process Return
Exit

APPENDIX N

ITEM	PURCHASED DATE	QUANTITY RETURNED
Gloves	10/22/2013	15

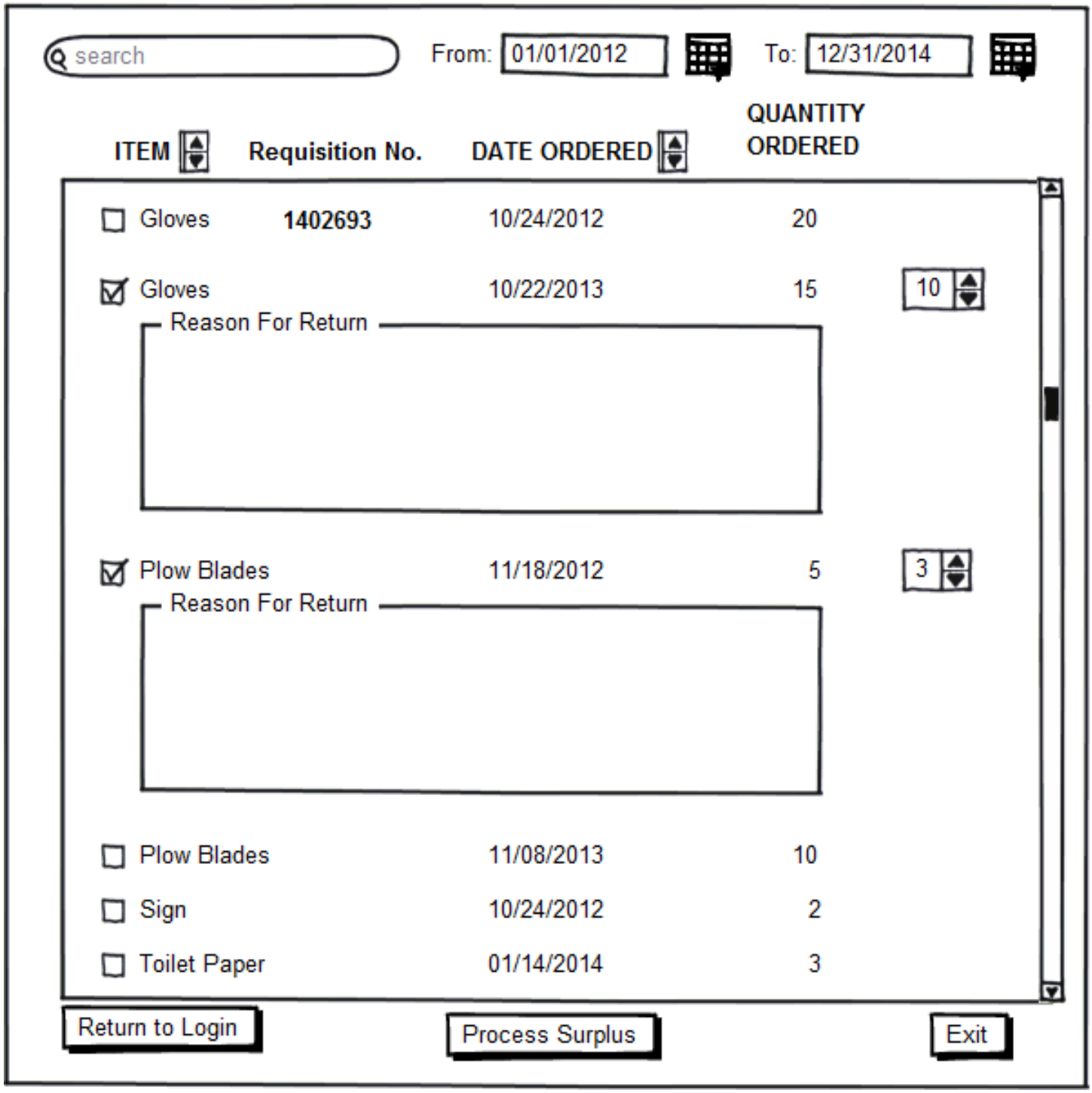
Reason For Return

Plow Blades	11/18/2012	5

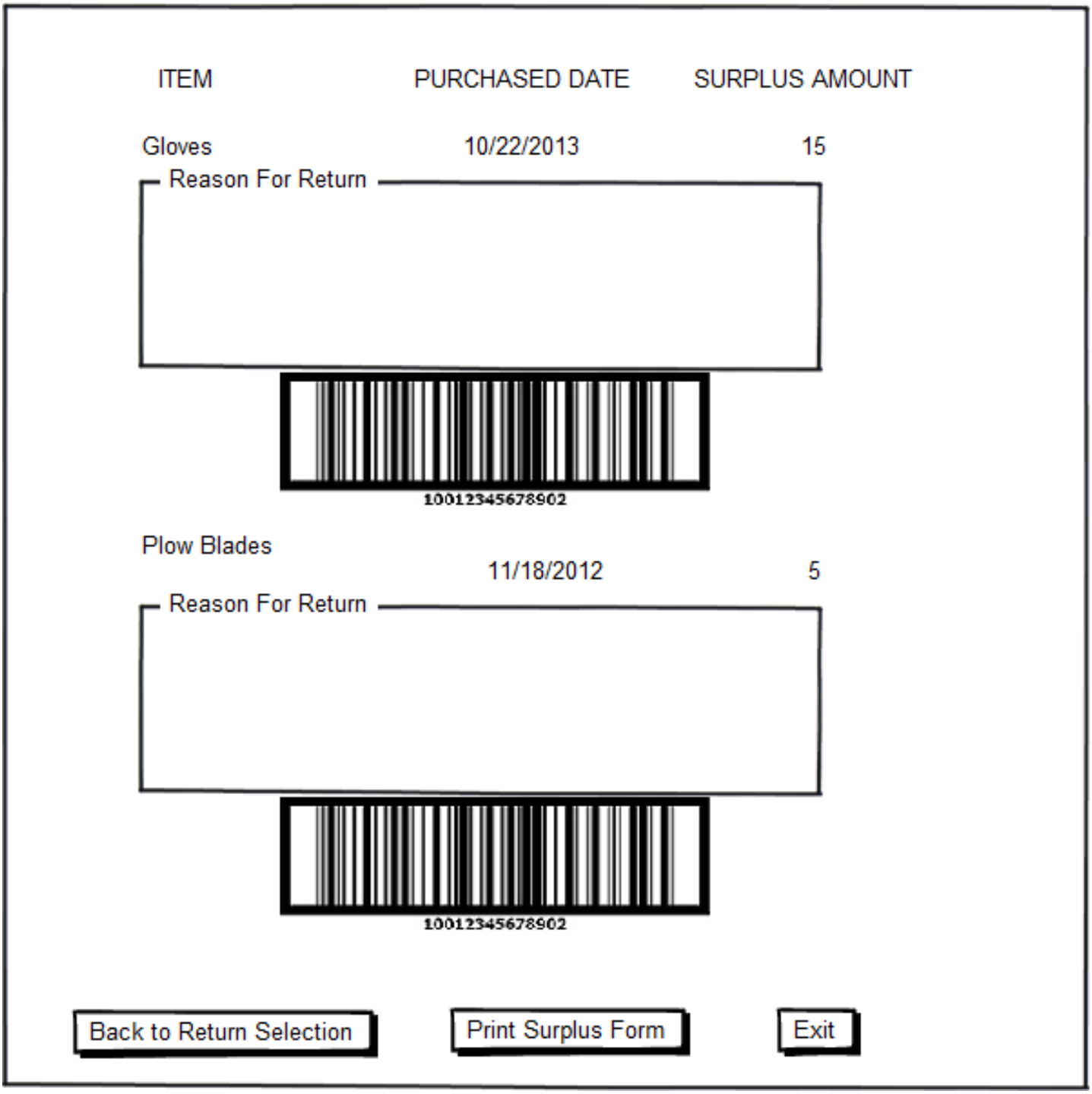
Reason For Return

Back to Return Selection | Print Return Form | Exit

APPENDIX N


search
From: 01/01/2012
To: 12/31/2014
ITEM
Requisition No.
DATE ORDERED
QUANTITY ORDERED
Gloves 1402693 10/24/2012 20
Gloves 10/22/2013 15 10
Reason For Return
Plow Blades 11/18/2012 5 3
Reason For Return
Plow Blades 11/08/2013 10
Sign 10/24/2012 2
Toilet Paper 01/14/2014 3
Return to Login
Process Surplus
Exit

APPENDIX N


ITEM
PURCHASED DATE
SURPLUS AMOUNT
Gloves
10/22/2013
15
Reason For Return
10012345678902
Plow Blades
11/18/2012
5
Reason For Return
10012345678902
Back to Return Selection
Print Surplus Form
Exit

Nebraska Information Technology Commission

Project Proposal Form

Funding Requests
for Information Technology Projects

2015-2017 Biennial Budget

IMPORTANT NOTE: Project proposals should only be submitted by entering the information into the Nebraska Budget Request and Reporting System (NBRRS). The information requested in this Microsoft Word version of the form should be entered in the NBRRS in the "IT Project Proposal" section. The tabs in the "IT Project Proposal" section coincide with sections contained in this Microsoft Word version of the form. Information may be cut-and-pasted from this form or directly entered into the NBRRS. ALSO NOTE that for each IT Project Proposal created in the NBRRS, the submitting agency must prepare an "IT Issue" in the NBRRS to request funding for the project.

Project Title	**ARMS ENHANCEMENTS**
Agency/Entity	**Department of Roads**

Notes about this form:

1. **USE.** The Nebraska Information Technology Commission ("NITC") is required by statute to "make recommendations on technology investments to the Governor and the Legislature, including a prioritized list of projects, reviewed by the technical panel..." Neb. Rev. Stat. § 86-516(8). "Governmental entities, state agencies, and noneducation political subdivisions shall submit all projects which use any combination of general funds, federal funds, or cash funds for information technology purposes to the process established by sections 86-512 to 86-524. The commission may adopt policies that establish the format and minimum requirements for project submissions." Neb. Rev. Stat. § 86-516(5). In order to perform this review, the NITC and DAS Budget Division require agencies/entities to complete this form when requesting funding for technology projects.
2. **WHICH TECHNOLOGY BUDGET REQUESTS REQUIRE A PROJECT PROPOSAL FORM?** See NITC 1-202 available at http://nitc.ne.gov/standards/. Attachment A to that document establishes the minimum requirements for project submission.
3. **COMPLETING THE FORM IN THE NEBRASKA BUDGET REQUEST AND REPORTING SYSTEM (NBRRS).** Project proposals should only be submitted by entering the information into the NBRRS. The information requested in this Microsoft Word version of the form should be entered in the NBRRS in the "IT Project Proposal" section. The tabs in the "IT Project Proposal" section coincide with sections contained in this Microsoft Word version of the form. Information may be cut-and-pasted from this form or directly entered into the NBRRS. ALSO NOTE that for each "IT Project Proposal" created in the NBRRS, the submitting agency must prepare an "IT Issue" in the NBRRS to request funding for the project.
4. **QUESTIONS.** Contact the Office of the CIO/NITC at (402) 471-7984 or ocio.nitc@nebraska.gov

General Information

Project Title	ARMS Enhancements
Agency (or entity)	Department of Roads

Contact Information for this Project:

Name	Bill Wehling
Address	1500 Highway 2
City, State, Zip	Lincoln, NE 68502
Telephone	402-479-3986
E-mail Address	Bill.wehling@nebraska.gov

Executive Summary

ARMS stands for **A**utomated **R**ight-of-Way **M**anagement **S**ystem. In the late 90s, the head of our Right-of-Way (ROW) Division had this idea of a workflow solution to handle the ROW process from the time preliminary plans came to the Division until the purchasing of ROW had been completed and the project was to be archived. They worked with developers at NDOR to design a system that used Lotus Notes as the base, since at that time it was the e-mail system that was used by most State Agencies. In 2008, the Office of the CIO (OCIO) began to implement a statewide e-mail system based on Microsoft Outlook. Agencies were to eliminate other mail systems, which meant NDOR had to get rid of Lotus Notes. That being the case, we began work on developing an RFP to find a vendor who could provide a Commercial off the Shelf (COTS) system to replace ARMS. All of this, including the award of the RFP, was completed prior to the decision to implement OnBase as the Enterprise Content Management System (ECMS) for the State.

As with a number of software implementations, as the work was being done a number of enhancements arose once the ROW Division began testing the software. We also discovered a number of items that we overlooked in the RFP that should have been included. Also, change in leadership along with other key members in the Division has led to changes in their processes which need to be taken into account in the system. The implementation has been going on for over two years and final sign-off for the RFP is planned in June, 2015. Once that is done, we will be in maintenance mode and any enhancements or additional work must be done as separate statements of work. That is the reason for this project.

Goals, Objectives, and Projected Outcomes (15 Points)

1. **Describe the project, including:**
   - **Specific goals;**
     Provide the ROW Division with a system that will process projects from inception until completion and eventually archived once final payments have been made on the project contract.
   - **and objectives;**
     - Implement enhancement as a result of items that were overlooked in the RFP
     - Implement enhancements that arose once the ROW Division began testing the software
     - Implement changes in business processes due to changes in management with ROW
     - Implement a process to move records from ARMS to OnBase once they are in a completed status so the archiving function can be accomplished using the State ECMS.

- **Expected beneficiaries of the project**
  ROW Division employees who will have one system from beginning to end of a project. ROW management, the Administration, Division Heads and District Engineers will be able to see the status of projects from beginning to end of a project.

- **Expected outcomes.**
  A one stop shop for ROW projects from beginning to end and then interfacing with OnBase to transfer records for archiving and records retention.

2. **Describe the measurement and assessment methods that will verify that the project outcomes have been achieved.**
   For each statement of work that will need to be created, there will be specific deliverables identified that must be completed in an acceptable manner. For example, one of these enhancements is a set of documents that must be created. The assessment method for those will be the ROW information is correct, it is formatted properly and it can be printed on one or two pages depending on the form.

3. **Describe the project's relationship to your agency comprehensive information technology plan.**
   The NDOR has a goal of standardizing on a Microsoft based environment utilizing the Microsoft .NET framework and SQL Server for our database. We want to decrease the number of tools we have to maintain and support in our technology area. The ARMS software runs in the .NET framework and on SQL server.

Project Justification / Business Case (25 Points)

4. **Provide the project justification in terms of tangible benefits (i.e. economic return on investment) and/or intangible benefits (e.g. additional services for customers).**
   A new system that takes advantage of current technology will allow us to;
   The addition of the missing RFP items, enhancements and changes to workflow will allow members of the ROW Division to automate a number of additional tasks and documents which will decrease the amount of time that is needed in the process. This will not only complete projects sooner but also provide information to other Divisions and Districts in a timely matter so they can complete their work as well. Currently with the new system being used on some projects, not having some of these completed is causing a delay in project delivery.

   The integration with OnBase will ensure that records retention policies will be followed as well, so we are not keeping any records longer than what they should be kept.

5. **Describe other solutions that were evaluated, including their strengths and weaknesses, and why they were rejected. Explain the implications of doing nothing and why this option is not acceptable.**
   As stated earlier, an RFP was developed and awarded to a company. This company is in the process of implementing the solution, which we hope to have completed by June, 2015 and then move on to maintenance mode. This project is to enhance the current system.

6. **If the project is the result of a state or federal mandate, please specify the mandate being addressed.**
   Since all agencies were directed to move away from their current e-mail systems to Microsoft Outlook, it could be said that it was a state mandate that had to be addressed with the RFP that was awarded.

Technical Impact (20 Points)

7. **Describe how the project enhances, changes or replaces present technology systems, or implements a new technology system. Describe the technical elements of the project, including hardware, software, and communications requirements. Describe the strengths and weaknesses of the proposed solution.**
   This project is to build on the ARMS that we are planning on completing implementation by June, 2015. There should be no additional hardware required and software will be modified, with additional code required for some enhancements that were identified. This is a COTS solution and will be maintained by the vendor under our current agreement. One weakness of this arrangement is the definition of a change; is it an enhancement or a bug fix? We have struggle with that on a number of issues with the vendor and it takes time to resolve, which means work is not getting done or is delayed.

8. **Address the following issues with respect to the proposed technology:**
   - **Describe the reliability, security and scalability (future needs for growth or adaptation) of the technology.**
   - **Address conformity with applicable NITC technical standards and guidelines (available at http://nitc.ne.gov/standards/) and generally accepted industry standards.**
   - **Address the compatibility with existing institutional and/or statewide infrastructure.**
     The applications and related data is hosted on infrastructure supported by the OCIO, so therefore it will comply with all NITC standards and guidelines. The OCIO is also very flexible when it comes to future growth and provides the redundancy and backups that we requested.

Preliminary Plan for Implementation (10 Points)

9. **Describe the preliminary plans for implementing the project. Identify project sponsor(s) and examine stakeholder acceptance. Describe the project team, including their roles, responsibilities, and experience.**
   Project Sponsors – Bob Frickel, ROW Division Head
   Project Manager – Keil Wilson, BTSD Project Manager
   Business Team Leader – Dave Ells, Jim Hertzel & Kurt Svoboda, ROW Division
   Data Team Leader – Lou Anne Daugherty, NDOR Data Warehouse Manager or one of her staff
   Other stakeholders include the various sections in ROW Division; Appraisal, Negotiation, Highway Beautification, Design and Property Management.

10. **List the major milestones and/or deliverables and provide a timeline for completing each.**
    Since the current project has not been completed, we have not determined any milestones or timelines for the completion of the identified enhancements and other items.

11. **Describe the training and staff development requirements.**
    Most of our ROW Division has already been trained on the system as part of the requirements for system testing. As enhancements are completed there will need to be short training sessions on how to use the new functionality. Those will be handled by the ROW Division leaders along with the Business Team Leaders.

12. **Describe the ongoing support requirements.**
    Frontline support will be done by members of the ROW Division support team. Anything that they cannot figure out will be sent to the vendor as part of an ongoing maintenance and support agreement.

Risk Assessment (10 Points)

13. Describe possible barriers and risks related to the project and the relative importance of each.

1. Selected vendor did not have a complete understanding of the project
2. Vendor does not supply enough resources or their resources do not meet expectations
3. Resources are unavailable from the stakeholders or BTSD
4. Personnel changes for various reasons such as promotions, transfers or personal issues
5. Issues with data conversion

14. Identify strategies which have been developed to minimize risks.

1. Try to have well defined requirements in each statement of work that are specific along with other expectations.
2. Have the required skills defined in each statement of work and as part of the response require experience of those who will be involved in the project. If problems occur after vendor selection then meet with the vendor to discuss possible changes.
3. Move responsibilities around within our own division and work with other divisions to determine when resources will be available and coordinate activities to best fit with the stakeholder's workload.
4. This may require a change in schedule in order to get someone up to speed and also reassigning of duties. We may need to reevaluate the workflow solutions if a new manager takes over and wants to change things.
5. Work with the vendor to develop a solution. We should also do our best to map out a data migration plan as part of the RFP. Worst case scenario is we have to convert to DB2 and then move to SQL after the project is complete.

Financial Analysis and Budget (20 Points)

15. Financial Information

The "Financial" information tab in the Nebraska Budget Request and Reporting System (NBRRS) is used to enter the financial information for this project (NOTE: For each IT Project Proposal created in the NBRRS, the submitting agency must prepare an "IT Issue" in the NBRRS to request funding for the project.)

Worksheet in Project Proposal Form.xls

Nebraska Information Technology Commission
Project Proposal Form
Section 8: Financial Analysis and Budget

	Prior Expended	FY2015 Appr/Reappr	FY2016 Request	FY2017 Request	Future	Total
1. Personnel Costs						$ -
2. Contractual Services						
2.1 Design			$ 75,000.00	$ 75,000.00		$ 150,000.00
2.2 Programming			$ 100,000.00	$ 100,000.00		$ 200,000.00
2.3 Project Management			$ 75,000.00	$ 75,000.00		$ 150,000.00
2.4 Other						$ -
3. Supplies and Materials						$ -
4. Telecommunications						$ -
5. Training						$ -
6. Travel						$ -
7. Other Operating Costs						$ -
8. Capital Expenditures						
8.1 Hardware			$ -	$ -		$ -
8.2 Software			$ -	$ -		$ -
8.3 Network						$ -
8.4 Other						$ -
TOTAL COSTS	$ -	$ -	$ 250,000.00	$ 250,000.00	$ -	$ 500,000.00
General Funds						$ -
Cash Funds			$ 250,000.00	$ 250,000.00		$ 500,000.00
Federal Funds						$ -
Revolving Funds						$ -
Other Funds						$ -
TOTAL FUNDS	$ -	$ -	$ 250,000.00	$ 250,000.00	$ -	$ 500,000.00

Nebraska Information Technology Commission
Enterprise Project Status Dashboard – as of December, 2014

Project: **LINK – Procurement**				Contact: **Bo Botelho**		
Start Date	01/14/2013	Orig. Completion Date	10/31/2013	Revised Completion Date		~~01/06/2014~~
	December	October	September	July	May	Pending March
Overall Status						
Schedule						
Budget						
Scope						

Project Description

Workday Procurement standardizes business processes for procurement documents. Workday Procurement will be the data entry location for all procurement documents (requisitions, purchase orders and contracts). Approvals and printing of the documents will be processed in Workday. Selected supplier websites will be available for access to state contracted pricing through punch-out capability. Purchase Orders will be interfaced in to the State's financial system for encumbering, receipts, and accounts payable. Suppliers will be available for selection in Workday and their associated commodities and procurement contact information will be maintained within Workday.

Project Estimate: $1,895,800 ($1,624,009.27 has been expended)

Comments

The Workday Procurement project has been suspended. The Department will continue to prioritize the current upgrading of the EnterpriseOne financial system and ongoing support of the existing HCM solution.

Nebraska Information Technology Commission
Enterprise Project Status Dashboard – as of December, 2014

Project: **Network Nebraska Education**			Contact: **Tom Rolfes**			
Start Date	05/01/2006	Orig. Completion Date	06/30/2012	Revised Completion Date		08/01/2015
	December	October	September	July	May	March
Overall Status						
Schedule						
Budget						
Scope						

Project Description

Network Nebraska-Education is a statewide consortium of over 260 K-12 and higher education entities working together to provide a statewide backbone, commodity Internet, distance education, and other value-added services to its participants. Network Nebraska-Education is managed by the State Office of the CIO partnering with the University of Nebraska Computing Services Network (UNCSN).

Project Budget (2014-15): $717,781 ($387,510 has been expended)

Comments

December update:

Looking ahead to the fall 2014 procurement, Omaha commodity Internet will be rebid.. After hearing from the FCC that there will be no national preferred master contracts for internal connections equipment, the ESU-NOC voted to have the Office of the CIO and State Purchasing procure maximum discounts on up to 9 different types of equipment such as wireless access points, cabling, switches/routers, etc… This will become an invitation to bid to extend over the life of the FCC equipment funding (2015-2020) with a possible fiscal impact of $52 million for Nebraska K-12 schools.

October update:

Looking ahead to the fall 2014 procurement, Omaha commodity Internet will be rebid, and there will be possible rebid of some WAN circuits and some segments of the statewide backbone. A provider information meeting was held on 8/19/2014 at Varner Hall, informing them of public safety and Network Nebraska-Education developments. After hearing from the FCC that there will be no national preferred master contracts for internal connections equipment, the ESU-NOC voted to have the Office of the CIO and State Purchasing procure maximum discounts on up to 9 different types of equipment such as wireless access points, cabling, switches/routers, etc… This will presumably be an invitation to bid to extend over the life of the FCC equipment funding (2015-2020) with a possible fiscal impact of $52 million for Nebraska K-12 schools.

Additional Comments/Concerns:

The Network Nebraska-Education Participation Fee fund account has been updated with the 2014-15 estimated costs and the 1st quarter UNCSN invoice submitted on 11/12/2014. However, some expenditures from UNCSN may have been mislabeled in the wrong budget line categories and will be corrected in the next monthly report.

Even though the Chief Information Officer fulfilled the Legislative benchmark of "providing *access* (the ability to connect) to every public K-12 and public higher education entity at the earliest date and no later than July 1, 2012" [Neb. Rev. Stat. 86-5,100], the NITC Technical Panel has extended the enterprise project designation for Network Nebraska-Education until 8/1/2015 so that all public school districts that want to participate have actually connected.

Nebraska Information Technology Commission
Enterprise Project Status Dashboard – as of December, 2014

Project:	**Nebraska State Accountability (NeSA) (formerly Statewide Online Assessment)**	Contact:	**John Moon**

Start Date	07/01/2010	Orig. Completion Date	06/30/2011	Revised Completion Date	6/30/2015

	December	October	September	May	March	February
Overall Status						
Schedule						
Budget						
Scope						

Project Description

Legislative Bill 1157 passed by the 2008 Nebraska Legislature required a single statewide assessment of the Nebraska academic content standards for reading, mathematics, science, and writing in Nebraska's K-12 public schools. The new assessment system was named Nebraska State Accountability (NeSA), with NeSA-R for reading assessments, NeSA-M for mathematics, NeSA-S for science, and NeSA-W for writing. The assessments in reading and mathematics were administered in grades 3-8 and 11; science was administered in grades 5, 8, and 11; and writing was administered in grades 4, 8, and 11.

Project Estimate: $5,364,408 ($1,117,250.25 has been expended)

Comments

December update:

The student data will be uploaded to DRC for NeSA-Writing (NeSA-W) Operational Tests on December 5, 2014. The NeSA- W window is scheduled for January 19 through February 6, 2015 while districts have been conducting practice tests for NeSA-W since August 29, 2014. NDE has encouraged districts to participate in the NeSA-W practice tests with over 7,379 tests completed so far. Students have completed 1072 NeSA-W field test since the window opened on November 10, 2014. There have been minimal reports of any technology issues. The testing engine is the same for field testing and for secure operational testing.

NeSA-W test administration training for test administrators and N-TACS have been scheduled for January 5th, 6th, and 7th and invitations posted on the NDE Assessment website, http://www.education.ne.gov/Assessment/Index.html .

DRC and NDE has responded to district concerns about chromium browser "bug" that randomly turns on the "overwrite" mode and the connection requirement for dictionary/thesaurus/spell check tools to work. More technical explanation was posted on the eDIRECT site for districts to access.

October update:

During September, Nebraska Department of Education (NDE) staff members along with Data Recognition Corporation (DRC) test specialists constructed test forms for all NeSA - Reading, Math, and Science (NeSA-RMS) alternate and regular assessments for 2015. Students will take the tests between March 23rd and May 1, 2015.

DRC INSIGHT and Testing Site Manager Installation Training for NESA technology assessment contacts were completed on September 3-4, 2014. In addition, training on INSIGHT and Testing Site Management & Capacity/Load Testing was completed for N-TACs on September 16-17, 2014. Webex sessions were presented for eDIRECT Enrollments on Oct. 1-2.

Updated manuals for C4L User Guide for Administrators and State Users became available on September 30, 2014. Updated version of Installing and Configuring INSIGHT on iPads and Chromebooks were posted on Oct 1, 2014.

Issues reported by districts are being addressed by Ryne Keel and DRC helpdesk. NDE and Ryne of DRC are working to be present in districts to meet their needs for NeSA testing.

Additional Comments/Concerns:
Nebraska State Accountability (NeSA) is a statewide assessment system mandated by Nebraska Statute. Nebraska Department of Education has contracted with Data Recognition Corporation (DRC) to continue the development of the assessment system including management, development, delivery, administration, scanning/imaging, scoring, analysis, reporting, and standard setting for the online and pencil/paper reading, science, writing, and mathematics tests (NeSA-RMS) for July 1, 2014 through June 30, 2015. DRC will facilitate the delivery, administration, scanning/imaging, scoring, analysis, and reporting for the alternate pencil/paper reading, science, and mathematics tests during the same assessment window. DRC will deliver the online writing assessment (NeSA-W) for grades 8 and 11 and the pencil/paper writing assessment for grade 4 as well.

Nebraska Information Technology Commission
Enterprise Project Status Dashboard – as of December, 2014

Project:	**Nebraska Regional Interoperability Network (NRIN)**	Contact:	**Sue Krogman**

Start Date	10/01/2010	Orig. Completion Date	06/01/2013	Revised Completion Date	09/30/2015

	December	October	September	July	May	March
Overall Status	🟢	🟢	🟢	🟢	🟢	🟢
Schedule	🟡	🟡	🟡	🟡	🟡	🟡
Budget	🔴	🔴	🔴	🟢	🟢	🟢
Scope	🟢	🟢	🟢	🟢	🟢	🟢

Project Description

The Nebraska Regional Interoperability Network (NRIN) is a project that will connect a majority of the Public Safety Access Points (PSAP) across the State by means of a point to point microwave system. The network will be a true, secure means of transferring data, video and voice. Speed and stability are major expectations; therefore there is a required redundant technology base of no less than 100 mbps with 99.999% availability for each site. It is hoped that the network will be used as the main transfer mechanism for currently in-place items, thus imposing a cost-saving to local government. All equipment purchased for this project is compatible with the networking equipment of the OCIO.

Project Estimate: $10,820,003 ($8,915,330.26 has been expended)

Comments

NEMA is struggling with issues of governance and maintenance of the network. Governance would be needed at the local jurisdiction and not at the state agency (there is no state agency is heading the project, it's all run at the local jurisdiction). There is no formal governance heading the project.

December update:
All issues on the process have been alleviated and the quote, invoicing and billing process has been addressed and refined. Weather conditions should not be a big factor over the next couple of months as the majority of the work to be completed will be inside buildings and/or shelters.

October update:
Progress is slow because of the process of the Master Service Agreements with the OCIO. However, we are figuring out the system and expect for things to go much smoother in the near future. Estimated time for completion of the EC911 requirements for the East Central Region is 24 October 2014. At that time, both contractors will move to finish up links in the SE and NE Regions.

Additional Comments/Concerns:
It's possible that upcoming target dates might be missed. Based on the uncertainty of the infrastructure needed for the project and the time involved in obtaining the environmental approvals to proceed with the project, any target dates are fluid. Delays are inevitable due to the difficulty in locating adequate tower sites and negotiating leasing agreements and/or MOU's.

Nebraska Information Technology Commission
Enterprise Project Status Dashboard – as of December, 2014

Project: **MMIS**				Contact:		
Start Date	N/A	Orig. Completion Date	N/A	Revised Completion Date		N/A
	December	October	September	July	May	March
Overall Status						
Schedule						
Budget						
Scope						
Comments						

Project On Hold until renewed

Funding has been appropriated for a MMIS replacement in the current biennial budget starting July 1, 2014. Once the project moves forward (a RFP will be developed) DHHS will resume monthly reporting.

Nebraska Information Technology Commission
Enterprise Project Status Dashboard – as of December, 2014

Project: **District Dashboards**			Contact: **Dean Folkers**			
Start Date 07/01/2013	Orig. Completion Date 06/30/2015		Revised Completion Date			
	December	October	September	July	April	March
Overall Status						
Schedule						
Budget						
Scope						

Project Description

Made possible by a Statewide Longitudinal Data System (SLDS) grant from the United States Department of Education in 2012, the focus of the Nebraska Ed-Fi Dashboard initiative is to provide readily available data to the Nebraska classrooms to facilitate informed decision-making. Potential users include teachers, counselors, and administrators. NDE intends to leverage the Ed-Fi dashboard solution made available by the Michael & Susan Dell Foundation to provide Nebraska with an advanced student performance dashboard system to be customized for Nebraska needs. The Ed-Fi data standard will serve to define the initial data elements powering the Nebraska Ed-Fi dashboard.

Our Plan of Work for design, development, and piloting of the Nebraska Dashboards will commence in three phases, each to proceed subsequently upon successful completion of the previous phase, between the months of September 2013 and December 2014. The phases include: Phase I - Dashboard Readiness (September 2013-February 2014), Phase II – Dashboard Development (February 2014-June 2014), and Phase III – Dashboard Deployment (June 2014-December 2014).

Project Estimate: $466,623.75 has been expended, grant funds only

Comments

December update:

The project is running behind the original baseline schedule by about five - six months. The primary cause for extended project duration are changes in the pilot SIS vendor implementation schedules. All three pilot SIS vendors, Pearson, Tyler Technologies and Infinite Campus, are experiencing delays in planned start of development and readiness for data staging with pilot districts. The project and sponsor have agreed to adjust the dashboard schedule to align with vendor schedules. The revised plan is to start staging activities in early 2015, dependent upon vendor progress, and reschedule the dashboard pilot testing for spring 2015. Delays in vendor implementation and data staging will have an impact on the planned start of data warehouse validation with production data. However, the project is still on schedule for data warehouse and accountability data mart pilot testing in the spring of 2015. Additionally, there have been delays in Nebraska SSO integration, development of the Nebraska SSO portal, on premise implementation for Ed-Fi v.Next and completion of dashboard co-development required for the initial pilot. These delays impact the overall timeline and budget but are not a significant factor in readiness for data staging with the pilot districts.

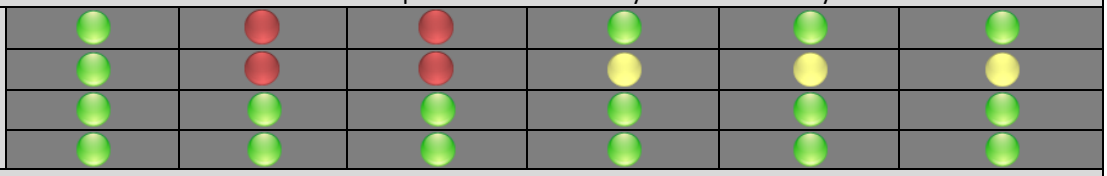
October update:

Overall the project is running behind schedule by about four months for vendor implementation, SSO implementation, Ed-Fi v.Next on premise support and planned co-development/ knowledge transfer activities with Nebraska Department of Education staff. The project and sponsor have agreed to adjust the dashboard schedule due to vendor delays in development activities. The revised plan is to start staging activities in late fall 2014, dependent upon vendor progress, and reschedule the dashboard pilot testing for early 2015. Delays in vendor implementation and data staging will have an impact on the planned start of data warehouse validation. However, the project is still on schedule for data warehouse and accountability data mart pilot testing in the spring of 2015. The delay in co-development will not have an impact on planned staging activities with vendors nor the start of pilot testing.

Additional Comments/Concerns:

None

Nebraska Information Technology Commission
Enterprise Project Status Dashboard – as of December, 2014

Project: **EnterpriseOne System Upgrade**				Contact:	**Lacey Pentland**	
Start Date	10/01/2013	Orig. Completion Date	10/03/2014	Revised Completion Date		TBD
	December	October	September	July	May	March
Overall Status						
Schedule						
Budget						
Scope						

Project Description

The State of Nebraska has been using JD Edwards to support the State's agencies for over ten years. The current EnterpriseOne 9.0 system is relatively stable with a medium level of modifications. The program is planned, as much as possible, to be a technical upgrade with minimal impact on the existing business processes, interfaces and the related applications. The current applications landscape is proposed to be upgraded as follows:

- Upgrade from E1 9.0 to E1 9.1 to stay current with the JD Edwards technology stack
- Migrate/Retrofit required customizations to E1 9.1 based on the keep drop analysis
- Be on the latest stack
- Simplification of the existing ecosystem – minimize customization, expand usage of JDE application
- Leverage standard functionalities provided by new features of E1 9.1

Project Estimate: $2,250,000 ($1,096,750.20 has been expended)

Comments

December update:

The EnterpriseOne 9.1 system is stable and the modification disposition phase was completed on 11/10/2014. Functional testing started 10/20/2014 with a target date for completion on 12/11/2014. UAT is in the planning stages, a Mock Go-Live conversion is scheduled to start on 12/12/2014 in preparation for the UAT phase.

Current work completed:

- Retrofit Modification was completed (including BI Publisher) on 11/10/2014.
- Completed pending CNC items found in further analysis. This included syncing BI Publisher objects across environments and installed dcLINK ASU in PD910.
- Additional Wipro resource for FA/CAMS was not on boarded.
- Continued Functional Testing since last update on 10/8/2014.
- Completed the analysis of objects not in projects and got them promoted to PY910 for functional testing
- (Approximately 1000+).

Next Steps:

- Functional Testing scheduled to be completed by 12/11/2014.
- Complete pending CNC items: This includes JDE.INI, Data Dictionary, UDC (User Defined Codes) changes,
- BI Publisher server configuration and complete the dcLINK upgrade for UAT Phase.
- UAT Phase: Creation of PD910 and Functional team in planning stages.
- Mock Go-Live Conversion scheduled to begin on 12/12/2014.

October update:

Adjustment to project dates is needed to get EnterpriseOne 9.1 code current and testing. The go-live date will be impacted.

Current work completed:

- Completed installing EnterpriseOne 9.1 code to bring the system current 9/15/2014.
- Developers were given access to proceed with checking in code on 9/18/2014.
- PY910 Full Package was built and deployed on 10/3/2014.
- PY910 was released to the Functional Team on 10/01/2014 for data validation (completed on 10/06/2014).
- Development is almost complete with BI Publisher objects still pending (approximately 145).

- Functional Testing started week of 10/06/2014.

Next Steps:

- An action plan to be created to get BI Publisher objects in sync so development can be completed.
- Complete the analysis of objects not in projects and get them promoted to PY910 for functional testing (Approximately 1000+).
- Complete pending CNC items found in further analysis. This includes syncing BI Publisher objects across environments; install dcLINK ASU in PS910 and PD910, complete JDE.INI, Data Dictionary and UDC changes.
- Continuation of Functional Testing.
- Review plan for onboarding additional Wipro resource for FA/CAMS.

Nebraska Information Technology Commission
Enterprise Project Status Dashboard – as of December, 2014

Project:	**Medicaid Eligibility & Enrollment System**	Contact:	**Eric Henrichsen**

Start Date	10/28/2014	Orig. Completion Date	06/30/2016	Revised Completion Date	N/A

	December	October	September	July	May	March
Overall Status						
Schedule						
Budget						
Scope						

Project Description

The Affordable Care Act (ACA) included numerous provisions with significant information systems impacts. One of the requirements was to change how Medicaid Eligibility was determined and implement the changes effective 10/1/2014. As a result of the lack of time available to implement a long-term solution, the Department of Health and Human Services implemented a short-term solution in the current environment to meet initial due dates and requirements. This solution did not meet all Federal technical requirements for enhanced Federal funding but was approved on the assumption that a long-term solution would be procured. An RFP was developed and procurement has been completed with Wipro selected as the Systems Integrator for an IBM/Curam software solution.

Project Estimate: $57,741,564 ($9,110,499 has been expended)

Comments

December update:

The project continues to have a slow start and the vendor is having difficulties developing an acceptable integrated project plan and project approach. “Business Process Reengineering” (review of Curam functionality and attempt to understand where state requirements vary from what exists) sessions have nearly completed but next steps are not very clear and completely agreed upon. The project and vendor are making improvements in many areas, but there is still cause for general concern and action plans needed. The vendor has delivered a “Go To Green” plan with improvement actions and due dates listed.

October update:

The official kick-off for the project occurred on 8/28/2014. A four month contracting period impacted Wipro’s ability to keep Key Personnel on the project. 4 of 6 Key Personnel have been replaced due to the start gap generated by the contracting process. Once the project started the project was hindered by the lack of a fully developed Integrated Project Plan, as well as a documented approach (beyond what was stated in the RFP) for how the project would be organized and the scope of the working groups. The project manager from Wipro has been changed and corrective actions are under way to finalize the Project Plan and Approach.

Nebraska Information Technology Commission
Enterprise Project Status Dashboard – as of December, 2014

Color Legend		
	Red	**Project has significant risk to baseline cost, schedule, or project deliverables.** **Current status requires immediate escalation and management involvement.** Probable that item will **NOT** meet dates with acceptable quality without changes to schedule, resources, and/or scope.
	Yellow	**Project has a current or potential risk to baseline cost, schedule, or project deliverables.** **Project Manager will manage risks based on risk mitigation planning.** Good probability item will meet dates and acceptable quality. Schedule, resource, or scope changes may be needed.
	Green	**Project has no significant risk to baseline cost, schedule, or project deliverables.** Strong probability project will meet dates and acceptable quality.
	Gray	**No report for the reporting period or the project has not yet been activated.**

NITC 3-205
Street Centerline Standards

Review Version 4.0
(Date 9.3.2014)

Category: Data and Information Architecture
Applicability: See Each Section of Standards
History: Adopted on [Month Day, Year]

NEBRASKA INFORMATION TECHNOLOGY COMMISSION GIS COUNCIL

TABLE OF CONTENTS

1.0 Standard

1.1 Description

This standard provides requirements necessary for the creation, development, delivery, and maintenance of street centerline data to support a statewide Nebraska Street Centerline Database (NSCD). The database provides spatial location of a seamless road network including information tied to that location with appropriate attribute data. The standard provides a consistent structure for data producers and users to ensure compatibility of datasets within the same framework layer and when used between other Nebraska Spatial Data Infrastructure (NESDI) framework layers such as address points, parcels and administrative/political boundaries.

There are multiple uses for street centerline data. These requirements will enable the data to be integrated not only with Next Generation 9-1-1 (NG9-1-1) but with existing state road network databases, routing services, emergency management, and public safety. Furthermore, this standard will serve as a guideline for future maintenance activity data requirements.

This standard does not restrict or limit additional information collected and stored in a particular database. The specific requirements for street naming and road conditions are primarily the responsibility of the local jurisdiction. These standards are meant to be a minimum set of standards and are subject to be updated based on technology enhancements, necessary workflow changes, and other data requirements.

The standard is not intended to be a substitute for an implementation design. These standards can be used at local, state and federal level to ensure interdisciplinary compatibility and interoperability with other databases. These standards integrate with existing standards such as the US Federal Highways, National Emergency Number Association (NENA), U.S. Postal Service (USPS) Addressing Standard, and other NITC related standards.

1.2 Spatial Representation

1.2.1 Geometric Placement

The methodology for proper geometric placement of street centerlines will vary based on the application. Street centerlines can be placed either manually or by calculated placement. The calculated placement of the street centerline is completed by automated software techniques, typically in CAD or GIS. Calculations or manual placement methods can be made from the physical footprint referenced from imagery, LiDAR or from mapping grade GPS.

Providing an adequate seamless street centerline database to support public safety and emergency response is the primary focus and will need to support NG9-1-1 standards identified by NENA.

1.2.2 Data Development

All data will consist of visual and verifiable street centerline with address ranges and other information corresponding to some level of ground control. The geometric placement of street centerlines can be derived from digitizing and using field GPS data collection.

1.2.2.1 Digitizing

The data source used to digitize or place street centerlines must meet the following minimum requirements.

Capture Scale for digitizing: 1:2400
Projection: Nebraska State Plane Coordinate System
Datum: North American Datum of 1983 (NAD83)
Source: Using aerial imagery that meets verified horizontal accuracy requirements for spatial resolution (12 inch minimum), preferably leaf-off. In cases where tree cover or other obstructions are identified in imagery, it will be necessary to conduct field verification of that location with a mapping grade GPS unit. The NAIP imagery therefore does not meet these accuracy standards.

LiDAR can also be used as a guide to support spatial accuracy placement of certain aspects of roads.

Imagery, LiDAR, or other source document that was used to digitize street centerlines that is newly acquired or not made available for public access will need to be provided to entity conducting quality control of the data.

1.2.2.2 Global Positioning Systems (GPS)

The development of street centerlines can be utilized using field observation and data collection techniques using mapping grade stationary and vehicle equipped GPS. Data collected using a mapping grade GPS will need to meet spatial accuracy requirements in section 1.2.3. Additional post processing of GPS data may be necessary to meet these spatial requirements.

1.2.3 Spatial Accuracy

1.2.3.1 Minimum Horizontal Accuracy Standard

Data that has been collected through digitization or visual representation methods must have an accuracy level of 3.28 to 9.84 feet (1-3 meters) or better.

When using mapping grade GPS, data will need to be collected at 3.28 feet (1 meter) or better. Additional requirements and suggestions for acquiring data by field GPS is located in the NENA GIS Data Collection and Maintenance Standards.

1.2.3.2 Minimum Vertical Accuracy Standard

There are no vertical accuracy requirements at this time.

1.2.4 Feature Type and Tables

1.2.4.1 Lines (Polylines)

A line represents the estimated center of a street or road and is not the legal right of way. Attribute data consists of four address range fields representing low to high on odd and even side of road segments necessary for geocoding. Address range values represent the actual address ranges for the line segment and stored in the feature attribute table of the data set.

1.2.4.2 Centerline Points

These are points used to create and reference particular information on street centerlines useful for assisting topology, addressing, and routing. These include point features considered as nodes to represent intersections, changes in street names, crossings, bridges, and jurisdictional boundary changes. Corresponding attribute information tied to each point is further defined in Section 1.3.6 Data Schema and Descriptions.

1.2.4.3 Tables

Corresponding tables for representing alternative street names can be further represented in tabular format. See Section 1.3.6 Data Schema and Descriptions for description on information for tables.

1.2.5 Projection and Datum

For data to be made available for NG9-1-1 operations, the data will need to be in a geographic coordinate system and not projected. This is necessary for the Emergency Call Routing Function (ECRF) or the Location Validation Function (LVF) uses for display.

EPSG:	4326 WGS84 / Latlong
Projection:	Geographic Coordinates, Plate Carrée, Equidistant Cylindrical, Equirectangular
Latitude of the origin:	0°
Longitude of the origin:	0°
Scaling factor:	1
False easting:	0°
False northing:	0°
Ellipsoid:	WGS84
Horizontal Datum:	WGS84
Vertical Datum:	WGS84 Geoid
Units:	decimal degrees
Global extent:	-180, -90, 180, 90

The NSCD will also be projected and delivered in Nebraska (State) Plane Coordinate System projection and datum for North American Datum of 1983 (NAD83). The plane coordinate values for a point on the earth's surface should be expressed in feet. The data will also be made available as Web Mercator with WGS 1984 horizontal datum for use among other needed web services.

1.3 Address Attributes

1.3.1 General Address Components

There are several components that make up a street address. Many are required to accurately define a specific address and location. When an address is matched against other address database files or for the purpose of generating an address it must be broken down into the individual components separated by a single space between the components. These standards follow the FGDC United State Thoroughfare, Landmark and Postal Address Data standard for address components. The minimum components required to accurately define an address are:

Primary Address Number:	123
Prefix Directional Street:	W
Street Name:	Main

Street Type:	ST
Street Direction:	NW
Unit Address Identifiers:	STE
Unit Number:	5
City:	Lincoln
State:	NE
Zip Code:	68509

Not all of the elements are required to be filled out for an address to be valid. However, the placeholders need to be present in the attribute table to accurately represent the accepted USPS standards. The USPS uses a parsing logic to enter address information into their appropriate fields. When parsing an address into the individual components, start from the right element of the address and work toward the left. Place each element in the appropriate field until all address components are isolated. This process facilitates matching files and produces the correct format for standardized output as well as isolating the mismatches to the closest possible fit before failing.

Associated attributes pertain to formatting and storing of address data within attribute tables that are external to and associated with feature attribute tables of geospatial datasets. For example, a city's master address database could be associated with and address matched against a city-wide geospatial dataset of points.

Each jurisdiction shall develop a master address database that can be referenced when new street names are being created or assigned so that duplications are avoided. All street names and address numbers shall be kept consistent with geospatial datasets.

1.3.2 Unique Identification Code

A unique identifier is required for the statewide street centerline database. This unique identifier allows the data to be tied or joined to other spatial data sets having the same identifier. The field name for this unique code in NSCD is "NEStreetID."

1.3.3 Directional Prefixes and Suffixes

The street address directional prefixes and suffixes shall always be abbreviated and capitalized, and shall not include periods. For example, North should be abbreviated as N. A complete set of directional prefix and suffix abbreviations are listed in Appendix 8.1.

1.3.4 Street Name

The NENA and FGDC United State Thoroughfare, Landmark and Postal Address Data standards will be followed for numbering streets. Street names will use capital and lower case letters. Street names should not be abbreviated unless it is common practice. For example, Doctor (DR) or Junior (JR) could be abbreviated.

Numeric streets shall be written using numbers rather than spelled out. For example, using "1^{ST}" rather than "FIRST". The numeric street names should use "TH", "RD", "ST" or "ND" characters as part of the street name.

Vanity street names and numbers shall not be used as the primary street name or address range component.

For classifying new street names, a standard method of assigning numeric and character street names shall be developed and adopted for a jurisdiction. The primary objective is to establish a grid within each jurisdiction regardless of the detailed pattern of the individual grid. Streets that run primarily east and west would use a numeric street name

grid, while those that run primarily north and south would be based on names from a master street name grid, or vice versa. The spacing of numeric street names should be based on a standard increment. A numeric street name should not be used outside of its proper location and sequence as established by the grid. The spacing of character streets should be based on a similar pattern. A character street name that is part of the grid should not be used outside of its proper location and sequence as established by the grid.

1.3.5 Street Type

Street type is signified by Street (ST), Boulevard (BLVD), Court (CT), and Road (RD) to give you an example. A complete set of street type domains are listed in Appendix 8.1. Each street address will have only one street type based on a logical pattern of street types. The street type names used follow USPS Postal Addressing Standards Publication 28 and other standards through the NENA Civic Location Data Exchange Format (CLDXF). An exception to this rule would be where two streets in the same area have the same name (e.g., Destination Dr and Destination Ct).

1.3.6 Odd/Even Numbering (Address Parity)

Parity shall remain consistent within the system adopted by the local jurisdiction. Address ranges are sets of numbers, usually comprised of four (4) distinct values, representing a range of addresses along the sides of the street centerlines by addresses at either end of a street centerline segment. Two numbers of the range represent the lowest addresses, and the other two represent the highest. The numbers are further distinguished as being on either the left or the right side of the segment. In topological terms, the lower numbers are associates with the FROM node of the segment, while the high numbers are associated with the TO node. Likewise, left and right are determined by the direction of the segment, as defined by the FROM and TO nodes. Topology is critical when a set of addressed centerlines are developed. Implementation of the address parity (e.g., odd versus even) is usually determined by the addressing software.

1.3.7 Sequential Direction

Address ranges shall increase as you travel in the direction adopted by the jurisdiction. The direction of each line segment shall follow the sequence direction of the address ranges. Typically this is accomplished by controlling from-node and to-node topology. One-way streets are NOT an exception to this rule. Curvilinear streets may violate this standard for short stretches provided that they are in compliance with respect to the general direction of the full street segment. Where compliance with this standard is difficult or impossible, it may warrant considering a change in the street name at the point where it changes direction.

1.3.8 Consistency with Distance-Based Address Grid

Depending on the preference of the jurisdiction there must be a defined standard interval based grid system. Whether it is hundred blocks as in a city, a potential 1000 addresses per mile, (a possible address every 5.28 feet), or another variation the jurisdictions accepted standards should be adhered to as close as possible. In rural areas addresses can be assigned based on the distance south or west from the nearest section line. This standard is particularly useful in areas that are largely undeveloped (and thus don't have many cross streets) or in areas that have existing streets that are not in the standard street name grid. This standard should generally be considered to be less important, however, than staying consistent with the address designations of cross streets.

1.3.9 Use of Characters

Street addresses shall not contain characters such as hyphens, dashes, +, #, & or other non-alpha-characters or symbols. An alpha-character added to the address as a sub-number is preferable to a fraction (e.g., 123 A is preferable to 123 1/2).

1.3.10 Data Schema and Descriptions

The following are feature layers necessary for a comprehensive street centerline database. The data schema and descriptions table is provided for each of the features. Each table provides the minimum requirements for each feature type.

Feature	Type	Description
Street Centerlines	Line Layer	Contains street centerline segments
Alternate Street Names	Table/Value	Contains alternate street names
Centerline Points	Point Layer	Point locations used to create road centerlines and assisting with topology, addressing, and routing.

Street Centerlines

The minimum required fields for these standards are represented by the following identifiers: "**R**" – required, "**RC**" –Recommended, and "**O**" – Optional.

Field Name	Field Type	Field Length	Field Description	Domain Name	Required Level
NEStreetID	Number	20	Unique ID of corresponding street centerline segment	N/A	R
PreModifier	String	15	Prefix directional component of segment name	PreModifier	R
PreDirectional	String	2	A street direction that precedes the street name (i.e., N, S, E, W, NE, NW, SE, SW)	Direction	R
PreType	String	20	A street type that precedes the street name (i.e., AVE, RD, ST, CIR, PL, PKWY, LN, DR, BLVD, ALY)	StreetType	R
StreetName	String	30	Legal authoritative street name component of segment name	N/A	R
PostType	String	4	A street type that follows the street name (i.e., AVE, RD, ST, CIR, PL, PKWY, LN, DR, BLVD, ALY)	StreetType	R
PostDirectional	String	2	A street direction that follows the street name (i.e., N, S, E, W, NE, NW, SE, SW)	Direction	R
PostModifier	String	12	A descriptor that follows the street name and is not a suffix or a direction (i.e., Access,	PostModifier	R

			Central, Crossover, Scenic, Terminal, Underpass)		
LFrom	Number	6	Left low address range	N/A	R
LTo	Number	6	Left high address range	N/A	R
RFrom	Number	6	Right low address range	N/A	R
RTo	Number	6	Right high address range	N/A	R
ParityLeft	String	1	Parity of address range on the left side of the road. E, O, B, Z for even, Odd, Both or Zero.	N/A	R
ParityRight	String	1	Parity of address range on the right side of the road. E, O, B, Z for even, Odd, Both or Zero.	N/A	R
LCityPostal	String	7	5-digit postal code on the left side of the road segment.	N/A	R
RCityPostal	String	7	5-digit postal code on the right side of the road segment.	N/A	R
FIPS_LCity	String	5	City FIPS code of left side of segment	N/A	R
FIPS_RCity	String	5	City FIPS code of right side of segment	N/A	R
FIPS_LCOUNTY	String	3	County FIPS code of left side of segment	CountyFIPS	R
FIPS_RCOUNTY	String	3	County FIPS code of right side of segment	CountyFIPS	R
FIPS_LSTATE	String	2	State FIPS code for left side of segment	StateFIPS	R
FIPS_RSTATE	String	2	State FIPS code for right side of segment	StateFIPS	R
ESNLeft	String	5	Emergency Service Number on left side of road segment	N/A	R
ESNRight	String	5	Emergency Service Number on right side of road segment	N/A	R
MSAGLeft	String	30	MSAG on left side of road segment	N/A	R
MSAGRight	String	30	MSAG on right side of road segment	N/A	R
StreetOwner	String	25	Current local entity responsible for creation of physical street segment	N/A	R
StreetMaint	String	25	Current local entity responsible for maintenance of street segment data	N/A	R
Create_DT	Date	26	Date/time stamp when data was first created	N/A	R

Update_DT	Date	26	Date/time stamp when data segment geometry/attribution last modified	N/A	R
SourceOfData	String	30	Entity that provided the data	N/A	R
Street_Status_CD	String	1	Status code indicating operational condition of street (1=open, 2=retired, 3=temporarily closed, 4=under construction)	StreetStatus	O
Interstate_Num	Number	2	Interstate Highway number of road segment, if appropriate	N/A	RC
US_Hwy_Num	Number	2	US Highway number of road segment, if appropriate	N/A	RC
State_Hwy_Num	Number	2	State Highway number of road segment, if appropriate	N/A	RC
Local_Rd_Num	Number	2	Local road number of road segment, if appropriate	N/A	RC
Alias1*	String	50	Alias name of road segment	N/A	RC
LZIP	String	10	Area descriptor to aid in geocoding, left side of centerline	N/A	R
RZIP	String	10	Area descriptor to aid in geocoding, right side of centerline	N/A	R
LOCAL_FUNC_CLASS	String	2	Functional Class assigned by road owner with possible suggestions guidelines for possible local classification schema	N/A	RC
STATE_FUNC_CLASS	String	2	Functional Class with classification schema define by standards TWG	N/A	RC
LRS_ID	String	20	ID associated to the road segment found in the NDOR Linear Referencing System	N/A	R
Length	Number	12	Calculated length in US Survey Feet	N/A	R
SpeedLimit	Number	2	The speed limit of the road segment in miles per hour (mph)	N/A	R

*Can have multiple Alias numbers relationship table to infinite number.

Alternate Street Names

Field Name	Field Type	Field Length	Field Description	Domain Name	Required Level
NEStreetID	Number	20	Unique ID of corresponding street	N/A	R

			centerline segment		
PreModifier	Alpha	15	Alternate street prefix type	PreModifier	R
AltStreetName	Alpha	30	Alternate street name. Example: Main, 2nd, Country Creek, Third	N/A	R
PostType	String	4	A street type that follows the street name (i.e., AVE, RD, ST, CIR, PL, PKWY, LN, DR, BLVD, ALY)	StreetType	R
PostDirectional	Alpha	2	Alternate street directional suffice. Example: N, S, E, W, NW, NE, SW, and SE	Direction	R
ASN	Alpha	75	Concatenated Alternate Street Name (STR_PRE+STR_NAME+STR_TYPE+STR_DIR)	N/A	O

Centerline Points

Field Name	Field Type	Field Length	Field Description	Domain Name	Required Level
Unique_ID	Number	9	Framework unique sequential identifier (generated by Framework data steward)	N/A	O
CPType	String	20	Type of point or node (intersection, bridge, railroad crossing, low water crossing, under pass, over pass, change of lane, change of street name in linear path)	N/A	O
X_COORD	Number	15	Points X coordinate	N/A	O
Y_COORD	Number	15	Points Y coordinate	N/A	O
Z_COORD	Number	6	Points Z elevation coordinate in feet	N/A	O
Agree_PT_IND	String	7	Indicator if point is or is not an agreement point.	AgreePoint	O
Create_DT	Date	26	Date/time stamp when that point geometry/attribution was first created	N/A	O
Update_DT	Date	26	Date/time stamp when geometry/attribution last modified	N/A	O
Status_CD	String	1	Code indicating operational condition of road segment point	N/A	O
Local_ID	Number	9	Local road centerline segment feature identifier, unique and permanent to the segment at the local level (generated by road authority/data custodian)	N/A	O

1.4 Data Format

The data format provided will need to be in an Esri enterprise geodatabase format that can be interpreted by commercial GIS software. A geodatabase schema including domains can be provided by contacting the State of Nebraska, Office of the CIO GIS Shared Services.

Tabular data will need to be provided in MS ACCESS, DBF, or MS SQL formats.

1.5 Maintenance

Authorities need to be identified for approval and assuring the data is implemented towards the database. This will ensure that the database is updated and maintained in a timely manner. After spatial and attribute updates and/or modifications are performed to the database it shall be submitted to the appropriate entity(s) responsible for performing quality control.

Maintenance of street centerline data determines the suitability to support the greatest range of applications. Spatial location of a seamless road network, including appropriate attribute data, is essential for many projects. Therefore, maintenance of this data is necessary to provide the maximum return on investment.

1.5.1 Reporting Errors and Handling Updates

The reporting of errors need to be directed to the appropriate entity in a timely manner. Updated spatial and attribute information in the database will also need to be redistributed. The date field in the database when the last record was modified will also need to be updated to ensure proper records management and communication with others in the workflow.

1.6 Quality Control

The quality of the NSCD is evaluated based on the overall functional correctness and completeness of the attribute and spatial data. The FGDC and NENA have adopted nationally recognized standards for accuracy testing of GIS data. NENA recommends that street centerline address data for use in data exchanges associated with NG-911 call processing be based on the FGDC compliant database. Refer to the FGDC United State Thoroughfare, Landmark and Postal Address Data standard and the NENA Civic Location Data Exchange Format (CLDXF) Standard for these data exchange standards.

1.6.1 Attribute Accuracy

a) Attribute fields are complete compared to source data having valid data elements, domain or range values.
b) Correct spelling in comparison of source data.
c) Standard first letter capitalized of every word and USPS capitalization of the State abbreviation.
d) Not to contain duplicate road segments, each road segment should be uniquely identifiable by the attributes.
e) Assure that the address range and information on the left or right of the street centerline are consistently either odd or even addresses.
f) For NG9-1-1 applications, the address ranges need to qualify and meet certain thresholds for the MSAG and ALI databases. For MSAG and ALI databases, the address for each point will need to be valid at a rate of 98 percent or better. For areas without an MSAG, the addresses will meet USPS Publication 28 standards. For the ALI database, this is determined by geocoding the addresses in the ALI database to the road layer with addresses developed for that area. Overall, the address data is consistent with source information from MSAG and ALI.

g) The correct formatting of street centerline attributes are used in these standards and are also included in the NENA standards and abbreviations as they are found in USPS Publication 28.
h) The temporal quality is met by being current through updating appropriate attributes and indicating the time the changes were made in the date updated field. Street centerlines that change due to add-on's from new construction or changes to the existing road structures will need to be updated frequently.
i) Quality checks for allowable domain values, summary statistics and record counts.

1.6.2 Physical Location

The quality of the physical location will be evaluated based on:
a) The placement of the street centerline representing it's real location and if it meets horizontal accuracy requirements. The National Standard for Spatial Data Accuracy (NSSDA) outlines a methodology for measuring positional accuracy. If additional testing is required, the NSSDA procedures outline the statistical procedures.
b) The geometric placement of the street centerline is consistently logical to the context of other features such as parcels and administrative/political boundaries.

1.6.3 Connectivity Validation (99% acceptance required with 1 foot tolerance)

a) Undershoots - Condition when the end of a linear geometry falls short of intersecting with another linear geometry
b) Overshoots - Condition when the end of a linear geometry extends beyond the point at which it should intersect and stop at another linear geometry
c) Node Mismatch - Condition when the end of a linear geometry falls short of intersecting with the end of another linear geometry
d) Non-coincident Intersecting Geometry - Condition when features intersect one another without creating corresponding vertices at the intersecting points
e) Nearly Coincident Geometry - Condition when a vertex of one geometry falls within the tolerance of a vertex of another geometry

1.6.4 Linear Referencing System (LRS) Validation (99% acceptance required)

a) Missing LRS Keys - Condition when records are missing required LRS keys: NLF_ID, Begin measure and/or End Measure
b) Begin Distance >= End Distance - Condition when begin distance measure greater than or equal to end distance measure
c) Overlapping Distances - Condition when records have the same NLF_ID and that contain overlapping distances between the end measure of one record and the begin measure of another record
d) Linear Measure/Geometry Ratio - Condition when the user-defined linear measure (end distance minus begin distance) compared to the measured map distance for each records exceeds specified tolerance (90-120 percent)
e) Geometry sequence/direction problems - Condition when the digitized direction of geometry is not consistent with direction of increasing measures.
f) Gaps between geometries - Condition when gaps exist between geometry of records with the same NLF_ID exceed specified tolerance (10 ft.).

1.7 Integration with other Standards

1.7.1 Address Standards (NITC 3-206)

The street centerline and address elements identified in these standards shall meet the same address related field names found in the Address Standards NITC 3-206. This is to

assure the connection of street addresses and routing to address points having the same address information.

1.8 Metadata

A requirement for street centerline and address range data is creating and maintaining its metadata. The metadata for street centerline data will require detailing the characteristics and quality of submitted street centerline data. Information needs to be provided to allow the user sufficient information so they can determine the data's intended purpose as well as how to access the data. The metadata requires a process description summarizing collection parameters such as: contact information, data source, scale, accuracy, projection, use restrictions, and date associated to each street centerline segment. The process description will also need to be included to describe methodology towards the deliverable products.

1.8.1 Federal Metadata

The Federal Metadata Content Standard from FGDC should be used when feasible and in every effort possible to assure high quality rigorous standards. All geospatial street centerline geodatabases, and their associated attribute databases should be documented with FGDC compliant metadata outlining how the data was derived, attribute field definitions and values, map projections, appropriate map scale, contact information, access and use restrictions, to name a few.

1.8.2 State Metadata

These standards need to apply to Nebraska's metadata standards located within NITC 3-201 Geospatial Metadata Standard. All metadata from street centerline data will need to be registered through the metadata portal at NebraskaMAP (http://NebraskaMAP.gov). All developers of Nebraska-related geospatial data are encouraged to use the site to either upload existing metadata and/or use the online tools available on the site to create the metadata for street centerline data.

2.0 Purpose and Objectives

2.1 Purpose

The purpose of this standard is to provide the necessary requirements for the creation, development, delivery, and maintenance of street centerline and address range data to support a statewide NSCD. These standards will help ensure that street centerline and address range data creation and development are current, consistent, accurate, publicly accessible, and cost-effective.

2.2 Objectives

These standards will guide the statewide NSCD having the following objectives:

2.2.1 Provide guidance, street centerline schema, and necessary workflows to state and local officials as they work, either in-house or with private contractors, to create, develop and maintain street centerline and address range data. This can increase the likelihood that the data created will be suitable for the range of intended applications and likely future applications. The maintenance of street centerline and address range data is necessary for the data to be current and accurate.

2.2.2 Enhance coordination and program management across jurisdictional boundaries by insuring that street centerline and address range data can be horizontally integrated across jurisdictional and/or project boundaries, and other framework data layers for

regional or statewide applications.

2.2.3 Save public resources by facilitating the sharing of street centerline and address range data among public agencies or sub-divisions of agencies by incorporating data standards and following guidelines. Data that is developed by one entity can be done in a way that is suitable to serve the multiple needs of other entities. This avoids the costly duplication of developing and maintaining similar street centerline and address range data in the state.

2.2.4 Make street centerline and address range data current and readily accessible to the wide range of potential users through NebraskaMAP and other necessary resources.

2.2.5 Facilitate harmonious, trans-agency and public policy decision-making and implementation by enabling multiple agencies and levels of government to access and appropriately use current street centerline and address range data. This can make it more likely that intersecting public policy decisions, across levels of government, will be based on the same information.

2.2.6 Lay the foundation for facilitating intergovernmental partnerships for the acquisition and development of high-quality street centerline and address range data by defining standards that increase the likelihood that this data will meet the needs of multiple users.

2.2.7 Establish and promote the integration and interrelationships of street centerline and address range data with related NESDI framework layers through geometric placement and attributes.

3.0 Definitions

Accuracy

Absolute - A measure of the location of features on a map compared to their true position on the face of the earth.

Relative - A measure of the accuracy of individual features on a map when compared to other features on the same map.

Address

Actual or Real - The simple, everyday element that designates a specific, situs location, such as a house number or an office suite.

Range - Numbers associated with segments of a digital street centerline file that represent the actual high and low addresses at either end of each segment.

Theoretical - A location that can be interpolated along a street centerline file through geocoding software.

Vanity - A special address that is inconsistent with or an exception to the standard addressing schema.

Address matching – See Geocoding

Automatic Location Identification (ALI) - The automatic display at the PSAP of the caller's phone number, the address/location of the telephone and supplementary emergency services information of the location from which a call originates.

Attribute - Attributes are the properties and characteristics of entities.

Data Stewardship – Entity(s) responsible for developing and maintaining the data.

Datum – A set of values used to define a specific geodetic system.

Emergency Call Routing Function (ECRF) - A functional element in an ESInet which is a LoST protocol server where location information (either civic address or geo-coordinates) and a Service URN serve as input to a mapping function that returns a URI used to route an emergency call toward the appropriate PSAP for the caller's location or towards a responder agency.

Entity - A data entity is any object about which an organization chooses to collect data.

Geocoding – A mechanism for building a database relationship between addresses and geospatial features. When an address is matched to the geospatial features, geographic coordinates are assigned to the address.

Line - A linear feature built of straight line segments made up of two or more coordinates.

Location Validation Function (LVF) - A real time database that allows authorized service providers to validate a subscriber's location in real time using a pre-defined interface.

Master Street Address Guide (MSAG) - A listing of streets and house number hich describes the exact spelling of streets, street number ranges, and other address elements.

National Emergency Number Association (NENA) – A professional association consisting of emergency number agencies and telephone company personnel responsible for the planning, implementation, establishing national standards, management, and administration of emergency number systems.

Nebraska Spatial Data Infrastructure (NESDI) - A framework of geospatial data layers that have multiple applications, used by a vast majority of stakeholders, meet quality standards and have data stewards to maintain and improve the data on an ongoing basis. These layers are also consistent with the Federal National Spatial Data Infrastructure (NSDI).

Point - A geospatial feature that is stored as a single X-Y coordinate pair. Some data systems store X-Y-Z coordinates, where Z represents elevation of the point above a given surface (or datum).

Projection – A map projection flattens the earth, allowing for locations to by systematically assigned new positions so that a curved surface can be represented on a flat map

Public Safety Answering Point (PSAP) - An entity operating under common management which receives 9-1-1 calls from a defined geographic area and processes those calls according to a specific operational policy.

Road - Generally, this is the physical real-world feature that can be used for vehicular travel. However, this general definition is subject to the road owner's authority to define its accessibility (thus, while navigable by a vehicle, some linear features may be "trails" and thus excluded from the ORCDS). The federal definition used by ODOT for their purposes is appended below.

State Plane Coordinate System - The State Plane Coordinate System is a set of 124 geographic zones or coordinate systems designed for specific regions of the United States. It uses a simple Cartesian coordinate system to specify locations rather than a more complex spherical coordinate system (the geographic coordinate system of latitude and longitude). By thus ignoring the curvature of the Earth, "plane surveying" methods can be used, speeding up and simplifying calculations. The system is highly accurate within each zone (error less than 1:10,000). Outside a specific state plane zone, accuracy rapidly declines, thus the system is not useful for regional or national mapping

Topology – Spatial relationships and connectivity among graphic GIS features, such as points, lines and polygons. These relationships allow display and analysis of “intelligent” data in GIS. Many topological structures incorporate begin and end relationships, direction and right / left identification

Unique Identification Code - Every element is assigned an identification code, making it unique from other elements.

USGS United States Geological Survey - is a scientific agency of the United States government. The scientists of the USGS study the landscape of the United States and its natural resources.

4.0 Applicability

4.1 State Government Agencies

State agencies that have the primary responsibility for developing and maintaining street centerline and address range data for a particular jurisdiction(s) or geographic area (e.g. for counties for which it has assumed the primary role) are required to comply with the standards as described in Section 1. Those state agencies with oversight responsibilities in this area are required to ensure that their oversight guidelines, rules, and regulations are consistent with these standards.

4.2 State Funded Entities

Entities that are not State agencies but receive State funding, directly or indirectly, for street centerline, street naming, and address range development and maintenance for a particular jurisdiction or geographic area are required to comply with the standards as described in Section 1.

4.3 Other

Other entities, such as city and local government agencies (e.g. County Engineer, PSAPs, and municipalities) that receive state funds have the primary responsibility for developing and maintaining street centerline, street naming, and address range data are required to comply with the standards as described in Section 1.

5.0 Responsibility

5.1 NITC

The NITC shall be responsible for adopting minimum technical standards, guidelines, and architectures upon recommendation by the technical panel. Neb. Rev. Stat. § 86-516(6)

5.2 State Agencies

The State of Nebraska, Office of the CIO (OCIO) GIS Shared Services will be responsible for assuring that metadata is completed and the data is registered and available for distribution through NebraskaMAP.

5.3 Granting Agencies and Entities

State granting or fund disbursement entities or agencies will be responsible for ensuring that these standards are included in requirements related to fund disbursements as they relate to street centerlines and address range data.

5.4 Other

Local government agencies that have the primary responsibility and authority for street naming and street centerline placement will be responsible for ensuring that those sub-sections defined in Section 1 will be incorporated in the overall NSCD data development efforts and contracts.

6.0 Authority

6.1 NITC GIS Council

According to Neb. Rev. Stat. § 86-572(2), the GIS Council shall: Establish guidelines and policies for statewide Geographic Information Systems operations and management (a) The acquisition, development, maintenance, quality assurance such as standards, access, ownership, cost recovery, and priorities of data bases; (b) The compatibility, acquisition, and communications of hardware and software; (c) The assessment of needs, identification of scope, setting of standards, and determination of an appropriate enforcement mechanism; (d) The fostering of training programs and promoting education and information about the Geographic Information Systems; and (e) The promoting of the Geographic Information Systems development in the State of Nebraska and providing or coordinating additional support to address Geographic Information Systems issues as such issues arise.

7.0 Related Documents

7.1 NENA."NENA Next Generation 9-1-1 (NG9-1-1) Civic Location Data Exchange Format (CLDXF) Standard." NENA-STA-004. March 23, 2014. NENA Joint Data Technical/Next Generation Integration Committees, Next Generation Data Development Working Group.

7.2 National Emergency Number Association. “NENA Standard for NG9-1-1 GIS Data Model.”NENA-STA-XXX (Currently in Development),

7.3 NENA GIS Data Collection and Maintenance Standards, NENA 02-014, July 17, 2007

7.4 NENA Information Document for Synchronizing Geographic Information System databases with MSAG & ALI, NENA 71-501, Version 1.1, September 8, 2009

7.5 Federal Geographic Data Committee (FGDC) United States Thoroughfare, Landmark and Postal Address Data Standard. FGDC Document Number FGDC-STD-016-2011. February 2011.

7.6 NITC 3-201 Geospatial Metadata Standard – http://nitc.ne.gov/standards/3-201.html

7.7 NITC 3-206 Address Standards (Waiting Review and Approval)

7.8 United States Postal Service Publication 28. “Postal Addressing Standards.”

8.0 Appendices

8.1 Domains

Domains are provided for street centerline, alternate street names, and centerline points. This information provides consistency in reporting of data across multiple data sets.

SuffixAddressNumber

Domain	Description
A	A
B	B
C	C
D	D
E	E
F	F
G	G
H	H
I	I
J	J
K	K
L	L
M	M
N	N
O	O
P	P
Q	Q
R	R
S	S
T	T
U	U
V	V
W	W
X	X
Y	Y
Z	Z

PreModifier

Domain	Description
Alternate	Alternate
Archway	Archway
Behind	Behind
Business	Business
Bypass	Bypass
Center	Center
De	De
Del	Del
Drive	Drive
Entrance	Entrance
Extended	Extended
Head	Head
Historic	Historic
La	La
Le	Le
Loop	Loop
New	New
Old	Old
Olde	Olde
Our	Our
Out	Out
Private	Private
Public	Public
Spur	Spur
The	The
To	To

Direction

Domain	Description
N	North
S	South
E	East
W	West
NE	Northeast
NW	Northwest
SE	Southeast
SW	Southwest

SeperatorElement

Domain	Description
And	And
At	At
By The	By The
Con	Con
De Las	De Las
For	For
For The	For The
In The	In The
Of	Of
Of The	Of The
On The	On The
The	The
To	To
Y	Y

PostModifier

Domain	Description
Access	Access
Alternate	Alternate
Approach	Approach
Business	Business
Bypass	Bypass
Center	Center
Central	Central
Centre	Centre
Company	Company
Concourse	Concourse
Connector	Connector
Crossing	Crossing
Crossover	Crossover
Cut Off	Cut Off
Cutoff	Cutoff
Dock	Dock
End	End
Entrance	Entrance
Executive	Executive
Exit	Exit
Extended	Extended
Extension	Extension
Industrial	Industrial
Interior	Interior
Loop	Loop
Overpass	Overpass
Private	Private
Public	Public
Ramp	Ramp
Scenic	Scenic
Service	Service
Spur	Spur
Terminal	Terminal
Transverse	Transverse
Underpass	Underpass

State

Domain	Description
NE	Nebraska
CO	Colorado
WY	Wyoming
SD	South Dakota
IA	Iowa
MO	Missouri
KS	Kansas

StateFIPS

Domain	Description
31	Nebraska
08	Colorado
56	Wyoming
46	South Dakota
19	Iowa
28	Missouri
20	Kansas

StreetSource

Domain	Description
PSC	Public Service Commission street centerlines
CountySC	County street centerlines
MunicipalSC	Municipal street centerlines
StateSC	State street centerlines
Other	Other

StreetStatus

Domain	Description
1	Open
2	Retired
3	Temporarily closed
4	Under Construction

StreetType (for both PreType and PostType) Additional commonly used street suffixes and abbreviations are located within the USPS Publication 28.

Domain	Description
Acrs	Acres
Aly	Alley
Anx	Annex
Arc	Arcade
Ave	Avenue
Bay	Bay
Bch	Beach
Bg	Burg
Bgs	Burgs
Blf	Bluff
Blfs	Bluffs
Blvd	Boulevard
Bnd	Bend
Br	Branch
Brg	Bridge
Brk	Brook
Brks	Brooks
Btm	Bottom
Byp	Bypass
Byu	Bayou
Chas	Chase
Cir	Circle
Cirs	Circles
Clb	Club
Clf	Cliff
Clfs	Cliffs
Clos	Close
Cmn	Common
Cmns	Commons
Cnrs	Corners
Cor	Corner
Cors	Corners
County Hwy	County Road
County Rte	County Touring Route
Cp	Camp
Cpe	Cape

StreetType, continued

Cres	Crescent
Crk	Creek
Crse	Course
Crst	Crest
Cswy	Causeway
Ct	Court
Ctr	Center
Ctrs	Centers
Cts	Courts
Curv	Curve
Cv	Cove
Cvs	Coves
Cyn	Canyon
Dl	Dale
Dm	Dam
Dr	Drive
Drs	Drives
Drwy	Driveway
Dv	Divide
End	End
Est	Estate
Ests	Estates
Expy	Expressway
Ext	Extension
Exts	Extensions
Fall	Fall
Farm	Farm
Fld	Field
Flds	Fields
Fls	Falls
Flt	Flat
Flts	Flats
Frd	Ford
Frds	Fords
Frg	Forge
Frgs	Forges
Frk	Fork
Frks	Forks
Frst	Forest
Fry	Ferry
Ft	Fort
Fwy	Freeway
Gate	Gate
Gdn	Garden
Gdns	Gardens
Gln	Glen
Glns	Glens
Grds	Grounds
Grn	Green
Grns	Greens
Grv	Grove
Grvs	Groves
Gtwy	Gateway
Hbr	Harbor
Hbrs	Harbors
Hl	Hill
Hls	Hills
Holw	Hollow
Hrbr	Harbor
Hts	Heights
Hvn	Haven
Hwy	Highway
I	Interstate
Inlt	Inlet
Is	Island
Isle	Isle
Iss	Islands
Jct	Junction
Jcts	Junctions
Knl	Knoll
Knls	Knolls
Ky	Key
Kys	Keys
Land	Land
Lck	Lock
Lcks	Locks
Ldg	Lodge
Lf	Loaf
Lgt	Light
Lgts	Lights
Lk	Lake
Lks	Lakes
Ln	Lane
Lndg	Landing
Loop	Loop
Mall	Mall
Mdw	Meadow
Mdws	Meadows
Mews	Mews
Ml	Mill
Mls	Mills
Mnr	Manor
Mnrs	Manors
Msn	Mission
Mt	Mount
Mtn	Mountain
Mtns	Mountains
Mtwy	Motorway
Nck	Neck
Opas	Overpass
Orch	Orchard
Otlk	Outlook
Oval	Oval
Ovlk	Overlook
Park	Park
Pass	Pass
Path	Path
Pike	Pike
Pkwy	Parkway
Pl	Place
Pln	Plain
Plns	Plains
Plz	Plaza
Pne	Pine
Pnes	Pines
Pr	Prairie
Prom	Promenade
Prt	Port
Prts	Ports
Psge	Passage
Pt	Point
Pts	Points

StreetType, continued

Radl	Radial
Ramp	Ramp
Rd	Road
Rdg	Ridge
Rdgs	Ridges
Rds	Roads
Rdwy	Roadway
Rise	Rise
Riv	River
Rnch	Ranch
Row	Row
Rpd	Rapid
Rpds	Rapids
Rst	Rest
Rte	Route
Rue	Rue
Run	Run
Shls	Shoals
Sho	Shoal
Shr	Shore
Shrs	Shores
Skwy	Skyway
Smt	Summit
Spg	Spring
Spgs	Springs
Spur	Spur
Sq	Square
Sqs	Squares
St	Street
Sta	Station
State Hwy	State Touring Highway
State Pkwy	State Parkway
State Rte	State Route
Stra	Stravenue
Strm	Stream
Sts	Streets
Ter	Terrace
Tlpk	Trailer Park
Tpke	Turnpike
Trak	Track
Trce	Trace
Trfy	Trafficway
TrkTrl	Truck Trail
Trl	Trail
Trlr	Trailer
Trwy	Thruway
Tunl	Tunnel
Turn	Turn
Twrs	Towers
Un	Union
Uns	Unions
Upass	Underpass
US Hwy	Federal Highway
US Rte	US Route
Vale	Vale
Via	Viaduct
Vis	Vista
Vl	Ville
Vlg	Village
Vlgs	Villages
Vls	Villas
Vly	Valley
Vlys	Valleys
Vw	View
Vws	Views
Walk	Walk
Wall	Wall
Way	Way
Ways	Ways
Wds	Woods
Wels	Wells
Wl	Well
Wood	Wood
Xing	Crossing
Xrd	Crossroad
Xrds	Crossroads

UnitType

Domain	Description
APT	Apartment
BSMT	Basement
	Blank, unable to determine
BLDG	Building
DEPT	Department
FL	Floor
FRNT	Front
HNGR	Hanger
KEY	Key
LBBY	Lobby
LOT	Lot
LOWR	Lower
OFC	Office
PH	Penthouse
PIER	Pier
REAR	Rear
RM	Room
SIDE	Side
SLIP	Slip
SPC	Space
STOP	Stop
STE	Suite
TRLR	Trailer
UNIT	Unit
UPPR	Upper

AgreePoint

Domain	Description
Y	Yes
N	No

CountyFIPS

Domain	Description	Domain	Description	Domain	Description
1	Adams	63	Frontier	125	Nance
3	Antelope	65	Furnas	127	Nemaha
5	Arthur	67	Gage	129	Nuckolls
7	Banner	69	Garden	131	Otoe
9	Blaine	71	Garfield	133	Pawnee
11	Boone	73	Gosper	135	Perkins
13	Box Butte	75	Grant	137	Phelps
15	Boyd	77	Greeley	139	Pierce
17	Brown	79	Hall	141	Platte
19	Buffalo	81	Hamilton	143	Polk
21	Burt	83	Harlan	145	Red Willow
23	Butler	85	Hayes	147	Richardson
25	Cass	87	Hitchcock	149	Rock
27	Cedar	89	Holt	151	Saline
29	Chase	91	Hooker	153	Sarpy
31	Cherry	93	Howard	155	Saunders
33	Cheyenne	95	Jefferson	157	Scotts Bluff
35	Clay	97	Johnson	159	Seward
37	Colfax	99	Kearney	161	Sheridan
39	Cuming	101	Keith	163	Sherman
41	Custer	103	Keya Paha	165	Sioux
43	Dakota	105	Kimball	167	Stanton
45	Dawes	107	Knox	169	Thayer
47	Dawson	109	Lancaster	171	Thomas
49	Deuel	111	Lincoln	173	Thurston
51	Dixon	113	Logan	175	Valley
53	Dodge	115	Loup	177	Washington
55	Douglas	117	McPherson	179	Wayne
57	Dundy	119	Madison	181	Webster
59	Fillmore	121	Merrick	183	Wheeler
61	Franklin	123	Morrill	185	York

October 9, 2014

Mr. Rick Becker
Legal Counsel & Government Information Technology Manager
Nebraska Information Technology Commission
501 South 14th Street, 4th Floor
P.O. Box 95045
Lincoln, NE 68509-5045

Re: NITC 3-205: Street Centerline Standards

Dear Mr. Becker:
GeoComm, a 19 year public safety industry veteran, respectfully submits comments on the draft document "NITC 3-205: Street Centerline Standards."

GeoComm supports the standards outlined in the document. If the standards are adopted by the Nebraska Public Service Commission, there will be additional work required to bring existing county datasets into compliance – beyond the work which is currently being done by GeoComm in the State of Nebraska. Original GIS data development contracts and methodology were based on enhanced 9-1-1 requirements. GeoComm has continued to maintain GIS data to these standards for the PSAPs and, upon request, created supplemental data to enrich E9-1-1 technology capabilities. The newly emerging standards for NG9-1-1 differ from E9-1-1 standards due to the new uses, including criticality of spatially accurate GIS data, requiring additional attribute and spatial development. As such, additional funding should be provided via the existing wireless fund or via a future NG9-1-1 fund to support the data update processes and services.

Comments and questions pertaining to specific standards within the document follow.

1.2 Spatial Representation

1.2.2.1 Digitizing

Imagery, LiDAR, or other source document that was used to digitize street centerlines that is newly acquired or not made available for public access will need to be provided to entity conducting quality control of the data.

- Who is reviewing the data quality?

1.2.4 Feature Type and Tables

1.2.4.1 Lines (Polylines)

A line represents the estimated center of a street or road and is not the legal right of way. Attribute data consists of four address range fields representing low to high on odd and even side of road segments necessary for geocoding. Address range values represent the actual address ranges for the line segment and stored in the feature attribute table of the data set.

- "Actual address ranges" should be further defined. In rural settings, theoretical address ranges (following the addressing scheme) allow for more accurate address geocoding. It is best to consider both actual and theoretical address ranges when adding address attributes to a road centerline.

1.3.4 Street Name

Numeric streets shall be written using numbers rather than spelled out. For example, using "1ST" rather than "FIRST". The numeric street names should use "TH", "RD", "ST" or "ND" characters as part of the street name.

- There may be exceptions to this standard if a jurisdiction's Master Street Address Guide (MSAG) reflects the number written out. GeoComm's recommendation is to state whether or not jurisdictions are required/encouraged to update MSAGs according to this standard.

Please contact me directly, Stacen Gross, Regional Sales Consultant, if you have questions throughout this evaluation process. I can be reached via email at sgross@geo-comm.com or by telephone at (320) 281-2186.

Sincerely,

Stacen Gross
Regional Sales Consultant

9th October, 2014

Rick.becker@nebraska.gov
NITC

Re: Comments regarding NITC 3-205: Street Centerline Standards

Dear Mr. Becker and the Technical Panel of the Nebraska Information Technology Commission:

As both a vendor working in this arena and as a resident of the State of Nebraska that utilizes E911 services GIS Workshop, Inc. (GISW) and its employees appreciate the hard work and dedication that have gone into creating and drafting these standards. GISW thanks you for the opportunity to comment and provide input on these important standards.

Where possible we will attempt to reference the appropriate page number and section on the standards document. Comments and questions that don't reference a particular section and are more general in nature will be confined to the end of this document.

Page 2, 1.2.2.1 Digitizing
The document refers to several elements related to map accuracy. The primary references being "Capture Scale for digitizing: 1:2400" and "…verified horizontal accuracy requirements for spatial resolution (12 inch minimum)…" Are we to assume that the document is referring to National Map Accuracy Standard (NMAS) 1:2400 mapping accuracy requirements per the National Standard for Spatial Data Accuracy (NSSDA)? If so, we recommend this be explicitly stated AND the actual statistical test for this accuracy be stated somewhere in the document and referenced in the document. This will help draw attention to the (well intentioned) but unnecessarily high accuracy requirements. In addition it will help GIS practitioners perhaps more completely understand the statistical requirements of the NSSDA. Note: section 1.6.2 goes a little further in expressing accuracy requirements, but we feel it is still not enough.

Page 2, 1.2.2.1 Digitizing
"…The NAIP imagery therefore does not meet these accuracy standards"

We applaud the effort to increase the accuracy of digital products. However, if NITC (via these standards) forces the acquisition of leaf off, higher accuracy imagery, this will cost NE tax payers will cost several million dollars per acquisition and this expenditure will need to occur every few years…the benefit in higher spatial accuracy just simply isn't worth the expense especially as the proposed standard will only mean meaningful gains in accuracy of centerlines measured in a handful of feet and inches. In practical language…the majority of in car navigation systems and smart phones today use data digitized from NAIP imagery…and it looks and works very well.

402.436.2150
4949 NW 1st Street, Lincoln NE 68521

The NAIP imagery provides an excellent, “free” source of imagery that is updated periodically by the federal government. As an agricultural state, Nebraska is unlikely to be cut from the NAIP program, thus this “free” imagery will be available for many years to come.

We recommend the NITC technical panel revert to accuracy standards that allow use of the free NAIP imagery, but maintain a recommendation to use higher accuracy imagery where it is already available.

Page 5, 1.3.6 Odd/Even Numbering (Address Parity)
There is a broader problem regarding addressing in Nebraska and this is as good a section as any to once again address it. County to county addressing schemes for many counties do not match. In other words, not only is there no numbering parity, but the road names are also different. This occurs at approximately 50% of the county borders in NE. These standards do not address this issue, neither do these standards provide a way to handle or record these mismatches (and note, these issues were born because each PSAP/County was allowed to implement their own addressing/naming conventions across the state and were not caused by NEPSC or NITC).

We recommend that the NITC educate themselves about this issue and resolve to support an effort to get county to county border addressing to match. Without resolution of this issue, NE will **NEVER** be able to enjoy a seamless, statewide street centerline database….

Page 10, 1.4 Data Format
“The data format will need to be in an Esri Enterprise Geodatabase format…”

Historically, NITC and the State of Nebraska have employed a “vendor neutral” stance with regards to GIS data. As an Esri “Gold” business partner and long time Esri data user, this standard certainly assists GISW! However it amounts to a “sponsorship” of a private corporation by the State of Nebraska. We might add it is also becoming increasingly difficult to move data in and out of these proprietary formats and maintain ALL the information. By its nature, the proprietary Esri Enterprise Geodatabase contains functions and capabilities that no other format does…thus making export/import of all the information within the database impossible.

We recommend that NITC consider additional suitable data formats so as to not favor one particular vendor.

General Comments:

1. When does the NITC propose to adopt these standards? The documentation only refers to the public comment period.
2. When does the NITC propose these standards become enforceable? Will existing data be “grandfathered in”? Will there be a grace period for adoption? These standards in their current form, while laudable, will put a very heavy fiscal burden on PSAPs, counties and the NEPSC (to the tune of millions of dollars) as it will require a complete rebuild of

all existing 911 street centerline data to meet these standards….we recommend a grace period of at least 5 years to ease adoption of these standards

Thank you once again for inviting our participation. If you should have any further questions, please contact me using the information below.

Sincerely

Claire Inbody
Executive Vice President, Technical Services
GIS Workshop, Inc.

Email: cinbody@gisworkshop.com
Tel: 402 436 2150

NITC GIS Council Street Centerline and Address Working Group
Public Comment Review and Recommendations for

NITC 3-205 Street Centerline and NITC 3-206 Address

12.01.2014

The following are comments and recommendations to recent public comments received by the NITC Technical Panel for the NITC 3-205 Street Centerline and NITC 3-206 Address standards. The GIS Council has also added additional attribute fields for both Street Centerline and Address standard and follow each section. This review is conducted by various NITC GIS Council members and NITC GIS Council Street Centerline and Address Working Group members who were involved in development of the standards.

NITC 3-205: Street Centerline

GeoComm Comments (10/9/2014)

1.2 Spatial Representation

1.2.2.1 Digitizing

Reviewer Question/Comment: *Who is reviewing the data quality?*

GIS Council Comments: There are many components involved in the process to assure what data is meeting appropriate standards. This involves several entities having responsibilities and authorities. These are currently already outlined in Sections 1.5, 5 and 6. Additional specifics are also dealt with in other documents such as business plans, data models and specifications depending on the project.

Recommendation: No changes to standards at this time.

1.2.4.1 Lines (Polylines)

Reviewer Question/Comment: *"Actual address ranges" should be further defined. In rural settings, theoretical address ranges (following the address scheme) allow for more accurate address geocoding. It is best to consider both actual and theoretical address ranges when adding address attributes to a road centerline.*

GIS Council Comments: We recommend suggesting adding more information about actual versus theoretical address ranges for this section. Definition for theoretical is also referenced as the word 'potential' in other references.

Recommendation:

Modify the following information to section 1.2.4.1 to read,

A line represents the estimated center of a street or road and is not the legal right of way. Attribute data consists of four address range fields representing low to high on odd and even side of road segments necessary for geocoding. Address range values can be represented as theoretical (potential) or actual address ranges for the line segment and stored in the feature attribute table of the data set.

It is recommended whenever possible to develop actual address ranges. Theoretical address ranges typically start with zero and end with 99 for each street centerline segment. This includes every address between zero and 99 that is contained within each segment. Actual address ranges are defined as the actual ranges that exist along a street. The ranges can start with either a zero or one and end with a number that best represents that range for each street centerline segment. This method is desirable, as it produces greater range accuracies compared to theoretical address ranges. This results in better representation of geocoded addresses in relation to a street centerline. However, this approach is more costly to derive as it requires additional verification at the field to determine the exact range. If potential ranges are used, it is recommended to keep the range to a level appropriate for the segment. For example, consider going from a segment starting at 100 to 150 compared to 100 to 198.

1.3.4 Street Name

Reviewer Question/Comment: *There may be exceptions to this standard if a jurisdiction's Master Street Address Guide (MSAG) reflects the number written out. GeoComm's recommendation is to state whether or not jurisdictions are required / encouraged to update MSAGs according to this standard.*

GIS Council Comments: This section indicates the requirements for street naming as outlined by NENA and FGDC. Because data will be consolidated into a statewide model, NENA is suggesting that all jurisdictions define their data layers and attributes the same as they are specified in the upcoming release of the NENA NG9-1-1 GIS Data Model standard. So this would mean it would be in best interest that the MSAGs, Automatic Location Information (ALI), and local addressing standards are encouraged to update their databases according to this standard.

Recommendation:

Add the following information at the end of section 1.3.4 to read,

For public safety jurisdictions who maintain a Master Street Address Guides (MSAG), Automatic Location Information (ALI), and other local addressing standards are encouraged to update their databases to these standards. The NG9-1-1 requirements, as defined by NENA, define data layers and attributes to be the same throughout each of these databases since they will need to be standardized anyway in a statewide model.

GIS Workshop Comments (10/9/2014)

1.2.2.1 Digitizing

Reviewer Question/Comment: *Are we to assume that the document is referring to NMAS 1:2400 mapping accuracy requirements per the NSSDA? If so, we recommend this to be explicitly stated AND the actual statistical test for this accuracy be stated somewhere in the document and referenced in the document.*

GIS Council Comments: Reference is to be made using NSSDA statistical and testing methodology as pointed out in FGDC Geospatial Positioning Accuracy Standards. "The NSSDA implements a statistical and testing methodology for estimating the positional accuracy of points on maps and in digital geospatial data, with respect to georeferenced ground positions of higher

accuracy." (Source: FGDC Geospatial Positioning Accuracy Standards Part 3, Appendix 3-D (FGDC-STD-007.3-1998)

Reference to conformance levels or accuracy thresholds can be referenced as National Map Accuracy Standards (NMAS) or Accuracy Standards for Large-Scale Maps through ASPRS. However, ASPRS formed the basis for update of the NMAS to address map scales smaller than 1:20,000.

Also to be clear, this section describes the originating data source requirements. We are referencing the use of orthoimagery as the source. With this being said, NENA GIS Data Collection and Maintenance Standards (NENA 02-014) references the necessary orthoimagery specifications for these types of applications. It is explicit in that "aerial photography shall be obtained at a maximum scale of 1:2400, 1 foot pixel resolution which produces a NSSDA Horizontal RMSE (Root Mean Squared Error) Accuracy of 5 feet or better."

Many other states are meeting or exceeding this standard for better control. The state of Kansas's E911 initiated a project last year to complete aerial acquisition having the same requirements we are suggesting. North Dakota provides recommendations even at a greater level of capture scale from imagery at 1:1200 in order to conduct a centerline and address point data creation.

Recommendation:
In Section 1.2.3 Spatial Accuracy section, add:

The minimum positional accuracy standards need to meet the following standard as set forth in the FGDC Geospatial Positioning Accuracy Standards Part 3, Appendix 3-D (FGDC-STD-007.3-1998)

In Section 7.0 Related Documents, add: FGDC Geospatial Positioning Accuracy Standards Part 3, Appendix 3-D (FGDC-STD-007.3-1998)

Reviewer Question/Comment: *In regards to the remark, "(well intentioned), but unnecessarily high accuracy requirements."*

GIS Council Comments: These requirements are well in the threshold needed for this data, particularly if it is already cited federally through NENA and FGDC standards. In addition, other states are benchmarking at the same requirements or even greater accuracy requirements. That is another reason why we are developing these standards as to reinforce and educate data developers on these standards on what is acceptable.

Recommendation: None

Reviewer Question/Comment: *In regards to remark, "If NITC adopts these standards…will cost NE tax payers…isn't worth the expense. We recommend the NITC Technical Panel revert to accuracy standards that allow use of the free NAIP imagery, but maintain a recommendation to use higher accuracy imagery where it is already available."*

GIS Council Comments: The state has many intended uses for higher quality imagery including 'leaf-off' applications that go beyond what NAIP provides. Even though NAIP is free, it was intended only to be used for specific purposes. The NITC GIS Council is positioning a better

framework of geospatial data requirements statewide to allow other data sets to be derived from data such as ortho imagery.

There is a risk associated to using NAIP imagery at it's current resolution particularly when used to derive other data that have other data accuracy requirements. This risk can also be associated to costs and will eventually be more costly as it does not provide the adequate level of base imagery needed for the state for a multitude of applications it does not currently serve. So, eventually it will cost the tax payers even more if we continue using less accurate data sets for specific data requirements and applications. NAIP imagery has a resolution of 1 meter. This represents a horizontal accuracy of within +/- 3 meters relative to referenced USGS digital ortho quarter quadrangles. The current 'free' NAIP does not meet NENA or this standard.

Obviously, there will be a transition period from current data to new or enhanced data using current and higher accuracy imagery. Data acquisition for imagery continues to improve in both affordability and accuracy. These requirements outlined here are well within reason and justifiable in the cost particularly as it reduces risk from data derived from old and less accurate data sets.

The NITC 3-204 Imagery standards that are currently in place indicate the necessary requirements for resolution and accuracy for future imagery collection. These requirements are also tied to other data requirements and standards such as LiDAR as indicated in NITC 3-203 Elevation Acquisition using LiDAR as well as street centerline and address standards that are proposed here.

Recommendation:

In Section 1.2.2.1 Digitizing at the end, add:

For information regarding standards for imagery and LiDAR requirements for Nebraska, refer to the Elevation Acquisition using LiDAR Standards (NITC 3-203) and Imagery Standards (NITC 3-204).

In Section 7.0 Related Documents, add:
NITC 3-203 Elevation Acquisition using LiDAR Standards
NITC 3-204 Imagery Standards

1.3.6 Odd/Even Numbering (Address Parity)

Reviewer Question/Comment: *We recommend that the NITC educate themselves about this issue and resolve to support an effort to get county to county border addressing to match. Without resolution of this issue, NE will NEVER be able to enjoy a seamless, statewide street centerline database.*

GIS Council Comments: The NITC GIS Council is well informed and familiar with this issue. We have placed these standards first so that we have a benchmark of what needs to be met. Several steps need to take place prior to operations to meet these standards, particularly governance. Therefore, it is not a question for these standards but merely for a governance plan and then operations to meet standards. These items are already in discussion and being recommended to appropriate entities involved in the matter.

Recommendation: This is not a standard issue but dealt with in governance and operational plans.

1.4 Data Format

Reviewer Question/Comment: *We recommend that NITC consider additional suitable data formats so as to not favor one particular vendor.*

GIS Council Comments: The importance of these recommendations are to assure that technical aspects are met for meeting the topological requirements of these standards. With this being said, this can limit the choices of software and the data file storage format requirements. If we included other formats this can limit the ability to create and test topology. For example, topology rules are not able to be applied to Shapefiles and would need to be converted to another format. Having a standardized process will also reduce additional costs by reducing additional steps through complex changes to formatting and conversion of data sets. We also want to be clear that we also need to provide the data back in similar fashion so we will recommend a statement to that effect.

Recommendation:

Modify 1.4 Data Format through the following modification:

The data format provided will need to be in a format that can be interpreted by commercial GIS software, preferably as an Esri geodatabase. A geodatabase schema including domains can be provided by contacting the State of Nebraska, Office of the CIO GIS Shared Services. Street centerline data stored on NebraskaMAP will be in an Esri geodatabase format but provided through various formats for other users to consume.

Other supporting tabular data will need to be provided in MS ACCESS, DBF, or MS SQL formats.

General Comments

The following questions were submitted as general comments and are best addressed through governance and operational plans. These standards become effective as soon as NITC approves them. However, the NITC GIS Council realizes a transition will need to occur and plans are currently being outlined to provide this guidance.

1. When does the NITC propose to adopt these standards? The documentation only refers to the public comment period.

2. When does the NITC propose these standards become enforceable? Will existing data be grandfathered in? Will there be a grace period for adoption? These standards in their current form, while laudable, will put a very heavy fiscal burden on PSAPs, counties and the NEPSC (to the tune of millions of dollars) as it will require a complete rebuild of all existing 911 street centerline data to meet these standards. We recommend a grace period of at least 5 years to ease adoption of these standards.

GIS Council Comments

The National Emergency Numbering Association (NENA) have made some additional requirements that will require us to update our attribute tables.

Modify the section 1.3.4 Data Schema and Descriptions section.

The minimum required fields for these standards are represented by the following identifiers: "**R**" – required, "**RC**" –Recommended, and "**O**" – Optional.

Field Name	Field Type	Field Length	Field Description	Domain Name	Required Level
Street_Status_CD	String	1	Status code indicating operational condition of street (1=open, 2=retired, 3=temporarily closed, 4=under construction)	StreetStatus	~~O~~ R
FullStreet	String	150	Unique ID of corresponding street centerline segment	N/A	R
OneWay	String	2	Signifies if the segment is oneway in direction	OneWay	O
Travel	String	20	Direction of travel for divided roadways	N/A	O
RoadClass	String	15	This is the classification for the road segment as adopted from the MAF/TIGER Feature Classification Codes (MTFCC) Attachment D	RClass	O
SurfType	String	10	This is the surface type of the segment	SType	O
ZCoordS	String	Number	Elevation at the start of the segment node	N/A	R
ZCoordE	String	Number	Elevation at the end of the segment node	N/A	R
ESNCenter	String	5	Responsible ESN responder at centerline	N/A	O
UpdateBy	String	50	Person who made the last update to the record	N/A	M
ActiveDT	Date	26	Date when the segment is activated or becomes available for use.	N/A	M
UActiveDate	Date	26	Date when the segment becomes unactive or not available for use.	N/A	RC

OneWay

Domain	Description
FT	One way travel from FROM or Start Node to TO or End Node
TF	One way travel from TO or END node to FROM or Start Node
B	Travel in both directions allowed

RClass

Domain	Description
1	Primary
2	Secondary
3	Local
4	Ramp
5	Service
6	Vehicular Trail
7	Walkway
8	Alley
9	Private
10	Parking Lot
11	Trail
12	Other

SType

Domain	Description
1	Paved
2	Gravel
3	Soil
4	Proposed
5	Minimum

Delete Domain Table UnitType as it is not needed

NITC 3-206 Address

GIS Workshop Comments (10/9/2014)

1.2.2.1 Digitizing

Reviewer Question/Comment: *Are we to assume that the document is referring to NMAS 1:2400 mapping accuracy requirements per the NSSDA? If so, we recommend this to be explicitly stated AND the actual statistical test for this accuracy be stated somewhere in the document and referenced in the document.*

GIS Council Comments: Reference is to be made using NSSDA statistical and testing methodology as pointed out in FGDC Geospatial Positioning Accuracy Standards. "The NSSDA implements a statistical and testing methodology for estimating the positional accuracy of points on maps and in digital geospatial data, with respect to georeferenced ground positions of higher accuracy." (Source: FGDC Geospatial Positioning Accuracy Standards Part 3, Appendix 3-D (FGDC-STD-007.3-1998)

Reference to conformance levels or accuracy thresholds can be referenced as National Map Accuracy Standards (NMAS) or Accuracy Standards for Large-Scale Maps through ASPRS. However, ASPRS formed the basis for update of the NMAS to address map scales smaller than 1:20,000.

Also to be clear, this section describes the originating data source requirements. We are referencing the use of orthoimagery as the source. With this being said, NENA GIS Data Collection and Maintenance Standards (NENA 02-014) references the necessary orthoimagery specifications for these types of applications. It is explicit in that "aerial photography shall be obtained at a maximum scale of 1:2400, 1 foot pixel resolution which produces a NSSDA Horizontal RMSE (Root Mean Squared Error) Accuracy of 5 feet or better."

Many other states are meeting or exceeding this standard for better control. The state of Kansas's E911 initiated a project last year to complete aerial acquisition having the same requirements we are suggesting. North Dakota provides recommendations even at a greater level of capture scale from imagery at 1:1200 in order to conduct a centerline and address point data creation.

Recommendation:
In Section 1.2.3 Spatial Accuracy section, add:

The minimum positional accuracy standards need to meet the following standard as set forth in the FGDC Geospatial Positioning Accuracy Standards Part 3, Appendix 3-D (FGDC-STD-007.3-1998)

In Section 7.0 Related Documents, add: FGDC Geospatial Positioning Accuracy Standards Part 3, Appendix 3-D (FGDC-STD-007.3-1998)

Reviewer Question/Comment: *In regards to the remark, "(well intentioned), but unnecessarily high accuracy requirements."*

GIS Council Comments: These requirements are well in the threshold needed for this data, particularly if it is already cited federally through NENA and FGDC standards. In addition, other

states are benchmarking at the same requirements or even greater accuracy requirements. That is another reason why we are developing these standards as to reinforce and educate data developers on these standards on what is acceptable.

Recommendation: None

Reviewer Question/Comment: *In regards to remark, "If NITC adopts these standards…will cost NE tax payers…isn't worth the expense. We recommend the NITC Technical Panel revert to accuracy standards that allow use of the free NAIP imagery, but maintain a recommendation to use higher accuracy imagery where it is already available."*

GIS Council Comments: The state has many intended uses for higher quality imagery including 'leaf-off' applications that go beyond what NAIP provides. Even though NAIP is free, it was intended only to be used for specific purposes. The NITC GIS Council is positioning a better framework of geospatial data requirements statewide to allow other data sets to be derived from data such as ortho imagery.

There is a risk associated to using NAIP imagery at it's current resolution particularly when used to derive other data that have other data accuracy requirements. This risk can also be associated to costs and will eventually be more costly as it does not provide the adequate level of base imagery needed for the state for a multitude of applications it does not currently serve. So, eventually it will cost the tax payers even more if we continue using less accurate data sets for specific data requirements and applications. NAIP imagery has a resolution of 1 meter. This represents a horizontal accuracy of within +/- 3 meters relative to referenced USGS digital ortho quarter quadrangles. The current 'free' NAIP does not meet NENA or this standard.

Obviously, there will be a transition period from current data to new or enhanced data using current and higher accuracy imagery. Data acquisition for imagery continues to improve in both affordability and accuracy. These requirements outlined here are well within reason and justifiable in the cost particularly as it reduces risk from data derived from old and less accurate data sets.

The NITC 3-204 Imagery standards that are currently in place indicate the necessary requirements for resolution and accuracy for future imagery collection. These requirements are also tied to other data requirements and standards such as LiDAR as indicated in NITC 3-203 Elevation Acquisition using LiDAR as well as street centerline and address standards that are proposed here.

Recommendation:

In Section 1.2.2.1 Digitizing at the end, add:

For information regarding standards for imagery and LiDAR requirements for Nebraska, refer to the Elevation Acquisition using LiDAR Standards (NITC 3-203) and Imagery Standards (NITC 3-204).

In Section 7.0 Related Documents, add:
NITC 3-203 Elevation Acquisition using LiDAR Standards
NITC 3-204 Imagery Standards

1.3.1 General Address Components

Reviewer Question/Comment: *Pertaining to, "Each jurisdiction shall develop a master address database that can be referenced when new street names are created or assigned so that duplications are avoided?" What format should this "master address database" be in? What should it contain? Which jurisdiction does NITC recommend maintain it? The PSAP? The State? The County? The PSAP? The incorporated cities, towns and villages? Most counties in Nebraska already contain duplication of street names because of individual towns within a county/PSAP each containing "1st Street, 5th Avenue etc. How does NITC propose these existing cases are handled?*

GIS Council Comments: Many of these comments are handled within other governance and operational plans and need no recommendations in these standards.

Because data will be consolidated into a statewide model, NENA is suggesting that all jurisdictions define their data layers and attributes the same as they are specified in the upcoming release of the NENA NG9-1-1 GIS Data Model standard. So this would mean it would be in best interest that the MSAGs and local authoritative addressing databases are encouraged to update their databases according to this standard. They need to be able to translate to a statewide address database. The required attributes for the database are clear and outlined with NENA and FGDC as to avoid duplication. Particularly, since each address is unique to the city and zip code it is being derived.

There are several entities having responsibilities and authorities. These are currently already outlined in Sections 1.5, 5 and 6. The format for a localized copy of addressing authorities need to coincide.

Recommendation:
In Section 1.3.1 General Address Components, modify:

Addressing authorities at the local level that maintain address data within their ~~Each~~ jurisdiction shall develop a master address database that can be referenced to the NAD when new street names are being created or assigned so that duplications are avoided. All street names and address numbers shall be kept consistent with geospatial datasets.

Note: The reviewer did not make this comment in the Street Centerline standards. As to maintain consistency between the standards the following modifications will be made in the Street Centerline standards in Section 1.3.1 General Address Components.

Addressing authorities at the local level that maintain address data within their ~~Each~~ jurisdiction shall develop a master address database that can be referenced to the NSCD when new street names are being created or assigned so that duplications are avoided. All street names and address numbers shall be kept consistent with geospatial datasets.

1.3.2 Unique Identification Code

Reviewer Question/Comment: *May a unique ID be reused? If so, how and when? What are the rules for the stickiness of a unique ID? For example, what if a property is demolished and later rebuilt in the same or similar physical location with the same address, does the ID remain (and therefore history) or should it receive a new ID?*

GIS Council Comments: This really depends on the situation and the ID needs to be considered in an agile approach. The UniqueID relates two objects – the digital point itself as stored in a table and characteristics about that point. As long as the Unique identifier maintains the tie to the characteristics of the data and is able to be coincident from a local database to the statewide database it would be accepted to reuse UniqueIDs. Addresses do not cease to exist but attribution about that point can change. There are cases where we may need to reroute services to a preexisting location. The only situation we have discussed to change or retire addresses is if a series of addresses where to be removed or renumbered due to changes in buildings destroyed and rebuilt (ie, several houses to tall buildings or complex of apartments). However, even in the case where the address may be similar but then you have multiple buildings, you still would need to track sub-address information in order to properly route callers to a location within that address.

It is much easier to maintain the original Unique ID to the same address and not reassign to a different address. There are other purposes for the NAD beyond public safety and we will need to maintain continuity of the statewide database with other databases that we have relationships to using the same UniqueID. Local jurisdictions can keep maintaining their defined ID as long as it is still has conformity to the NAD UniqueID. However, the standard also applies to a specific unique ID for the statewide database.

Recommendation:

Modify 1.3.2 Unique Identification Code

A unique identifier is required for the statewide address point database. This unique identifier allows the data to be tied or joined to other spatial data sets having the same identifier. The field name for this unique code in NAD is "NEAddressID." The first four (4) digits are the county name followed by the number associated from the local addressing authority. In certain cases, the unique identifier may change at the local level. This is acceptable and will also need to be reflected as the change to the statewide address point database.

1.4 Data Format

Reviewer Question/Comment: *We recommend that NITC consider additional suitable data formats so as to not favor one particular vendor.*

GIS Council Comments: The importance of these recommendations are to assure that technical aspects are met for meeting the topological requirements of these standards. With this being said, this can limit the choices of software and the data file storage format requirements. If we included other formats this can limit the ability to create and test topology. For example, topology rules are not able to be applied to Shapefiles and would need to be converted to another format. Having a standardized process will also reduce additional costs by reducing additional steps through complex changes to formatting and conversion of data sets. We also want to be clear that we also need to provide the data back in similar fashion so we will recommend a statement to that effect.

Recommendation:

Modify 1.4 Data Format through the following modification:

The data format provided will need to be in a format that can be interpreted by commercial GIS software, preferably as an Esri geodatabase. A geodatabase schema including domains can be provided by contacting the State of Nebraska, Office of the CIO GIS Shared Services. Address data stored on NebraskaMAP will be in an Esri geodatabase format but provided through various formats for other users to consume.

Other supporting tabular data will need to be provided in MS ACCESS, DBF, or MS SQL formats.

1.5 Maintenance

Reviewer Question/Comment: *Identification of the numerous addressing authorities in NE is just the beginning. We believe only a thorough and ongoing training and education program will equip the "addressing authorities" with the knowledge and skills to comply with these standards. What does NITC propose to combat this?*

Reviewer Question/Comment: *What would the NITC consider a "timely manner" for providing updates to the central database by the jurisdiction?*

GIS Council Comments: These questions are best addressed elsewhere in other governance and operational plans and need no recommendations in these standards.

Recommendation: None

1.6.2 Physical Location

Reviewer Question/Comment: *NSSDA over reaching. See comments and responses from earlier as found in 1.2.2.1 Digitizing.*

GIS Council Comments: The requirements by NSSDA are clear. You are making assumptions in your determination on whether you can digitize accurately using NAIP. Also, with "leaf-on" imagery many primary living structures will have trees cover part or all of the structure? How can you digitize from accurately from this data? There are also techniques to get necessary results that do not entail climbing on roofs with GPS.

Recommendation: None, NSSDA outlines the procedure as per our reference.

General Comments

The following questions were submitted as general comments and are best addressed through governance and operational plans. These standards become effective as soon as NITC approves them. However, the NITC GIS Council realizes a transition will need to occur and plans are currently being outlined to provide this guidance.

1. When does the NITC propose to adopt these standards? The documentation only refers to the public comment period.

2. When does the NITC propose these standards become enforceable? Will existing data be grandfathered in? Will there be a grace period for adoption? These standards in their current form, while laudable, will put a very heavy fiscal burden on PSAPs, counties and the NEPSC (to the tune of millions of dollars) as it will require a complete rebuild of all existing 911 street

centerline data to meet these standards. We recommend a grace period of at least 5 years to ease adoption of these standards.

Reviewer Question/Comment: The name “NAD” to easily confused as North American Datum and not accurate description of the database.

GIS Council Comments: The general users are not familiar with North American Datum. This is not an issue. It also does not make any sense to add Point as it is already inclusive of an address would be considered at a location.

Recommendation: No recommendation to change the name.

GIS Council Comments

Modify the section 1.3.4 Data Schema and Descriptions section.

The following table represents the necessary data schema including field names, descriptions, and associated domains for the address point database. The minimum required fields for these standards are represented by the following identifiers: “**R**” – required, “**RC**” –Recommended, and “**O**” – Optional.

Field Name	Field Type	Field Length	Field Description	Domain Name	Required Level
FullAddress	String	75	Concatenated street address consisting of address number, pre direction, pre type, street name, street type, suffix direction, unit number, building, floor.	N/A	~~RC~~ R
MilePost	String	150	Mile marker or measurement at location	N/A	RC
NatGrid	String	15	This is the US National Grid address up to 10 digits at 1 meter	N/A	O
UpdateBy	String	50	Person who made the last update to the record	N/A	M
ActiveDT	Date	26	Date when the segment is activated or becomes available for use.	N/A	M
UActiveDate	Date	26	Date when the segment becomes unactive or not available for use.	N/A	RC

NITC 3-206
Address Standards

Review Version 4.0
(Date 9.3.2014)

Category: Data and Information Architecture
Applicability: See Each Section of Standards
History: Adopted on [Month Day, Year]

NEBRASKA INFORMATION TECHNOLOGY COMMISSION GIS COUNCIL

TABLE OF CONTENTS

1.0 Standard

1.1 Description

This standard provides requirements necessary for the creation, development, delivery, and maintenance of address point data to support a statewide Nebraska Address Database (NAD). The address database provides the spatial location and information tied to that location with appropriate attribute data. The standard provides a consistent structure for data producers and users to ensure compatibility of datasets within the same framework layer and when used between other Nebraska Spatial Data Infrastructure (NESDI) framework layers such as street centerlines and parcels.

There are multiple uses for address point data. These requirements will enable the data to be integrated not only with Next Generation 9-1-1 (NG9-1-1) but with existing state address databases, routing services, emergency management, public safety, tax assessment, and the state's enterprise geocoding application databases. Furthermore, this standard will serve as a guideline for future maintenance activity data requirements.

This standard does not restrict or limit additional information collected and stored in a particular database. The specific requirements for address naming and point placement are primarily the responsibility of the local jurisdiction. These standards are meant to be a minimum set of standards and are subject to be updated based on technology enhancements, necessary workflow changes, and other data requirements.

The standard is not intended to be a substitute for an implementation design. These standards can be used at local, state and federal level to ensure interdisciplinary compatibility and interoperability with other databases. These standards integrate with existing standards such as the National Emergency Number Association (NENA), Federal Geographic Data Committee (FGDC), U.S. Postal Service (USPS) Addressing Standard, and other NITC related standards.

1.2 Spatial Representation

1.2.1 Geometric Placement

The methodology for proper geometric placement of address points will vary based on the application. Address points can be placed either manually or by calculated placement. The calculated placement is completed by automated software techniques, typically in GIS. Calculations or manual placement methods can be made from the structure's visual footprint seen in imagery, LiDAR or a determined boundary. Site or structures that have an address assigned to it would be considered an address point.

Providing adequate address point locations to support public safety and emergency response is the primary focus and will need to support NG9-1-1 standards identified by NENA. At a minimum, one address point placed per address is suggested by these standards. For NG9-1-1 applications, there will be one address point provided for dispatching as to not create conflict in interpretation among other address point locations tied to the same street address when responding to emergencies. For other applications, additional address points can be created as long as they are notated in the attribute table for purpose of the point type. The following suggestions are recommended in priority of address point placement. If a primary structure is not addressable on the property parcel then a property access point is placed within the property driveway or access location. In cases where the primary structure is not visible from the addressable road, an additional access point will need to be placed in the middle of the entrance or access location within that property parcel. Additional address points are required for public safety at entrance locations for public structures such as schools, hospitals, and government offices.

Specific requirements for the placement of entrance locations are located within NENA standards source located in section 7.0.

There are additional standards and best practices for the placement of address points within structures outlined by NENA. This includes single address with multiple structures or entrances, single structure or entrances with multiple addresses, multiple addresses with one structure or entrance. In addition, there are address point placement recommendations for exterior and interior entrance locations within a structure.

1.2.1.1 Primary Structure

The primary address point should be placed within every principal address structure's location or footprint. Placement can be achieved either manually or calculated. When placed manually, the point should reflect the center or entrance to the addressed structure as long as it is within the structure's footprint (Figure 1). When calculated, it typically refers to placement of a centroid in the middle of the building footprint or polygon. Either of these two placement techniques assign the address with that structure.

Figure 1. Placement of address point within structure's footprint.

If a structure is not visible on aerial imagery or LiDAR, but it's physical location is represented by other supplemental resources, the point can be placed according to the supplement resources and needs to be confirmed with field verification.

For multiple units within a structure, there does not need to be additional address points placed for each unit. The single point can relate to a table having multiple listings of addresses for each unit. Consider using this method when addresses are relatively within 10 feet of each other.

1.2.1.2 Property Access

This is the placement of the address point to accessing the property of interest. This typically is a driveway, access road, or other entrance path to a property that is connected to a named road or other path from a different

property. Address points should be located at the primary driveway entrance within a parcel boundary. This point is placed only after the primary structure address point has been identified and placed or if there is no primary addressable structure on the property parcel. If parcel data exists to the property, then the point should fall within the parcel boundary in the middle of the driveway or other access area.

Figure 2. Placement of address point on primary entrance path within a parcel boundary as shown on the left address point for 7909. The illustration also shows the placement of the address point on the primary structure footprint. This is helpful in cases where the primary building is difficult to see from the primary entrance path off an addressed road.

Interim placement of address points can exist if a site or structure is not available at the time of recording. This can include conditions where site or building is under construction or new developments that may have future sub-addresses. The expectation is that these interim locations are noted during time of creation and future modifications can occur to both the geometric placement and attributes.

1.2.1.3 Other Placement Options

After the primary and/or secondary address points have been placed or in special cases where the primary and secondary conditions are not able to be met, then there are other address point placement options. Specific requirements for these placement options are located within NENA standards source located in section 7.0. The following are a few descriptions for other placement options.

a) Parcels

This section addresses the placement of the address point within a parcel boundary when there are no addressed structures or visible access road to the property. The address point can either be placed in the center of the parcel, within a parcel where an internal road or main structures are located, within a parcel at the center of the parcel frontage next to the road that

references the address, and within and front of a parcel using address ranges to guide placement. Parcels that do not have an addressable structure present will have the address point at the centroid within the boundary of the parcel. If there is discrepancy in the placement accuracy of the parcel itself, it is best to have the point located in the middle of the parcel until or at an offset distance from the boundary line from the road that references the address. This will assure that the address point is well within the parcel boundary in case the spatial location of parcel boundary is updated in the future. It also assures that other spatial relationships exist with other GIS layers.

b) Site

A site is defined as a place that has no known or recognized structure or boundary. These can include places such as parks, camp sites, recreational areas, and other large areas. In this case, either an address point is placed based on the centroid of a defined boundary or is associated as a landmark. Point location can also be manually located at the entrance or area of concentration of structures or activities within the site.

c) Geocoding from Road Centerlines

Address point placement is achieved by interpolation of road centerline address ranges. Points are placed based on a calculated method of directional offset representing left or right of the street and providing a desired distance to the property based on address range breaks located in the street centerline layer. This practice should be considered last resort as it provides inconsistency with distances to the actual structure or access location to a property. This technique is useful when establishing and double checking the correct attributes between the street centerline database corresponding to the address point database.

1.2.2 Data Development

All data will consist of visual and verifiable address point information corresponding to some level of ground control. The geometric placement of address points can be derived from digitizing and using field GPS data collection.

1.2.2.1 Digitizing

Address point placement can be completed by visual registration using aerial imagery, site plans or other graphical resources that have been spatially adjusted to meet minimum spatial accuracy requirements. The data source used to digitize or place address points must meet the following minimum requirements.

Capture Scale for digitizing: 1:2400
Projection: Nebraska State Plane Coordinate System
Datum: North American Datum of 1983 (NAD83)
Source: Using aerial imagery that meets verified horizontal accuracy requirements for spatial resolution (12 inch minimum), preferably leaf-off. In cases where tree cover or other obstructions are identified in imagery, it will be necessary to conduct field verification of that location with a mapping grade GPS unit. The NAIP imagery therefore does not meet these accuracy standards.

LiDAR can also be used as a guide to support spatial accuracy placement of certain aspects of building footprints.

Imagery, LiDAR, or other source document that was used to digitize street centerlines that is newly acquired or not made available for public access will need to be provided to entity conducting quality control of the data.

1.2.2.2 Global Positioning Systems (GPS)

The development of address points can be utilized using field observation and data collection techniques using mapping grade GPS. Data collected using a mapping grade GPS will need to meet spatial accuracy requirements in section 1.2.3. Additional post processing of GPS data may be necessary to meet these spatial requirements, particularly when placement of address point falls within the boundary of a structure.

1.2.3 Spatial Accuracy

1.2.3.1 Minimum Horizontal Accuracy Standard

Data that has been collected through digitization or visual representation methods must have an accuracy level of 3.28 to 9.84 feet (1-3 meters) or better.

When using mapping grade GPS, data will need to be collected at 3.28 feet (1 meter) or better. Additional requirements and suggestions for acquiring address point data by field GPS is located in the NENA GIS Data Collection and Maintenance Standards.

1.2.3.2 Minimum Vertical Accuracy Standard

There are no vertical accuracy requirements at this time. These standards are subject to change in the future as data maintenance and accuracy of address point placement is further needed in places such as structures having multiple floors.

1.2.4 Feature Type and Tables

1.2.4.1 Points

Single points will represent the address point features. Corresponding attribute information tied to each point is further defined in Section 1.3.6 Data Schema and Descriptions. Having one point per valid address ensures a one to one match for the purposes of geocoding.

1.2.4.2 Tables

Corresponding tables for one address point location but reference to multiple locations or sub-addresses can be further represented in tabular format. See Section 1.3.6 Data Schema and Descriptions for description on information for tables.

1.2.5 Projection and Datum

For data to be made available for NG9-1-1 operations, the data will need to be in a geographic coordinate system and not projected. This is necessary for the Emergency Call Routing Function (ECRF) or the Location Validation Function (LVF) uses for display.

EPSG:	4326 WGS84 / Latlong
Projection:	Geographic Coordinates, Plate Carrée, Equidistant Cylindrical, Equirectangular
Latitude of the origin:	0°
Longitude of the origin:	0°
Scaling factor:	1
False easting:	0°
False northing:	0°
Ellipsoid:	WGS84
Horizontal Datum:	WGS84
Vertical Datum:	WGS84 Geoid
Units:	decimal degrees
Global extent:	-180, -90, 180, 90

The NAD will also be projected and delivered in Nebraska (State) Plane Coordinate System projection and datum for North American Datum of 1983 (NAD83). The plane coordinate values for a point on the earth's surface should be expressed in feet. The data will also be made available as Web Mercator with WGS 1984 horizontal datum for use among other needed web services.

1.3 Address Attributes

1.3.1 General Address Components

There are several components that make up an address. Many are required to accurately define a specific address and location. When an address is matched against other address database files or for the purpose of generating an address it must be broken down into the individual components separated by a single space between the components. These standards follow the FGDC United State Thoroughfare, Landmark and Postal Address Data standard for address components. The minimum components required to accurately define an address are:

Primary Address Number:	123
Prefix Directional Street:	W
Street Name:	Main
Street Type:	ST
Street Direction:	NW
Unit Address Identifiers:	STE
Unit Number:	5
City:	Lincoln
State:	NE
Zip Code:	68509

Not all of the elements are required to be filled out for an address to be valid. However, the placeholders need to be present in the attribute table to accurately represent the accepted USPS standards. The USPS uses a parsing logic to enter address information into their appropriate fields. When parsing an address into the individual components, start from the right element of the address and work toward the left. Place each element in the appropriate field until all address components are isolated. This process facilitates matching files and produces the correct format for standardized output as well as isolating the mismatches to the closest possible fit before failing.

Associated attributes pertain to formatting and storing of address data within attribute tables that are external to and associated with feature attribute tables of geospatial

datasets. For example, a city's master address database could be associated with and address matched against a city-wide geospatial dataset of points.

Each jurisdiction shall develop a master address database that can be referenced when new street names are being created or assigned so that duplications are avoided. All street names and address numbers shall be kept consistent with geospatial datasets.

Additional information and guidelines for directional prefixes and suffixes, street naming, street type, address parity, sequential direction and consistency with distance-based address grid can be found in the Street Centerline Standards (NITC 3-205).

1.3.2 Unique Identification Code

A unique identifier is required for the statewide address point database. This unique identifier allows the data to be tied or joined to other spatial data sets having the same identifier. The field name for this unique code in NAD is "NEAddressID." The first four (4) digits are the county name followed by number associated from the local addressing authority.

1.3.3 Use of Characters

Street addresses shall not contain characters such as hyphens, dashes, +, #, & or other non-alpha-characters or symbols. An alpha-character added to the address as a sub-number is preferable to a fraction (e.g., 123 A is preferable to 123 1/2).

1.3.4 Data Schema and Descriptions

The following table represents the necessary data schema including field names, descriptions, and associated domains for the address point database. The minimum required fields for these standards are represented by the following identifiers: "**R**" – required, "**RC**" –Recommended, and "**O**" – Optional.

Field Name	Field Type	Field Length	Field Description	Domain Name	Required Level
NEAddressID	String	12	Unique ID of address point where first 4 characters are the first 4 letters of each County name. The remaining 8 characters of the number are provided by the local addressing authority.	N/A	R
NEStreetID	Integer	20	Unique ID of corresponding street centerline segment	N/A	R
State_PID	String	30	County FIPS code plus local government PID number (See Statewide Parcel Database ID requirements)	N/A	R
County_ID	String	3	County FIPS code of where address point resides	CountyFIPS	R
PrefixAddressNumber	String	10	An extension that precedes the address number	N/A	R
AddressNumber	Integer	6	The numeric identifier of a location along a thoroughfare (i.e., 100, 2345, 31)	N/A	R
SuffixAddressNumber	String	15	An extension that follows the address number (i.e., A through Z)	SuffixAddressNumber	R

PreModifier	String	15	A street name modifier that precedes the street name. (i.e., Alternate, bypass, loop, private, spur, etc.)	PreModifier	R
PreDirectional	String	2	A street direction that precedes the street name (i.e., N, S, E, W, NE, NW, SE, SW)	Direction	R
PreType	String	4	A street type that precedes the street name (i.e., AVE, RD, ST, CIR, PL, PKWY, LN, DR, BLVD, ALY)	StreetType	R
SeparatorElement	String	10	An element that precedes the StreetName which separates the PreType and StreetName	SeparatorElement	R
StreetName	String	30	Legal authoritative street name component of segment name	N/A	R
PostType	String	4	A street type that follows the street name (i.e., AVE, RD, ST, CIR, PL, PKWY, LN, DR, BLVD, ALY)	StreetType	R
PostDirectional	String	2	A street direction that follows the street name (i.e., N, S, E, W, NE, NW, SE, SW)	Direction	R
PostModifier	String	12	A descriptor that follows the street name and is not a suffix or a direction (i.e., Access, Central, Crossover, Scenic, Terminal, Underpass)	PostModifier	R
Building	String	60	The name of one among a group of buildings that have the same address number and street name, that are multiple independently named structures at the same address	N/A	R
Floor	String	10	A floor, story, or level within a building	N/A	O
NumberFloors	String	4	Number of floors in building	N/A	O
Room	String	10	A room identification in a building	N/A	RC
NumberRooms	String	4	Number of rooms in building or structure.	N/A	O
Seat	String	5	The place where a person may be located within a room or building.	N/A	O
Unit	String	4	A group or suite of rooms within a building that are under common ownership or tenancy, typically having a common primary entrance. (ie, A, 4, etc.)	N/A	R
UnitType	String	4	The unit type abbreviation. (ie, APT, BLDG, DEPT, FL, STE, UNIT	UnitType	C
Location	String	20	For sub-address, other than building, floor, unit, room or seat. For example, northeast	N/A	O

			corner of building.		
Subdivision	String	60	Subdivision name	N/A	C
City	String	40	Name of the municipality where the site is located. Also the postal community name associated to the zip code or postal code.	N/A	R
State	String	2	State name abbreviation	State	R
ZipCode	String	5	5 digit zip code	N/A	R
Ph_Zip4	String	4	Mailing post code +4 designation for the tax parcel	N/A	RC
FullAddress	String	75	Concatenated street address consisting of address number, pre direction, pre type, street name, street type, suffix direction, unit number, building, floor.	N/A	RC
SubAddress	String	75	Entire sub-address string that consists of Building, Floor, Unit, and Location fields concatenated together	N/A	RC
LandmarkName	String	60	Common Place Name such as library, town hall, Chimney Rock, stadium	N/A	R
MSAG	String	30	Service community name associated with the location of the address.	N/A	R
ESN	String	5	Emergency Service Number associated with the location of the address identified by MSAG.	N/A	R
PSAP	String	25	Public Service Access Point identifier number	N/A	R
PrimaryPoint	String	3	Is this the primary point? Yes or No. Distinguishes between Primary and SubAddress points.	PrimaryPoint	R
PointType	String	3	Address point type (primary structure, primary property entrance, secondary structure, secondary property entrance, parcel centroid, etc.)	PointType	R
PlaceType	String	75	Description of the type of feature for address (House, duplex, trailer, apartment, secondary structure, utility, school, hospital, commercial business, industrial, etc.)	N/A	RC
AddOwner	String	25	Current local entity responsible for creation of address data	N/A	R
AddMaint	String	25	Current local entity responsible for maintenance of address data	N/A	R
AddressSource	String	30	The primary data source for the attributes used in this	AddressSource	R

			record		
SourceOfData	String	30	Entity that provided the data	N/A	R
Create_DT	Date	26	Date/time stamp data was collected	N/A	R
Update_DT	Date	26	Date/time stamp the record was last modified	N/A	R
RecentFieldEditor	String	30	Recent field editor of data	N/A	R
Add_Status__Code	String	2	Status code indicating operational condition of address point (1=active, 2=retired, 3=unknown)	N/A	R
Basement	String	3	Is there a basement? Yes, No	N/A	O
StrmShelter	String	25	The type of storm shelter	N/A	O
OccupTime	String	50	Time when the site/structure is typically occupied (7:00 – 6:00 pm)	N/A	O
X_COORD	Numeric	15	Points X coordinate	N/A	R
Y_COORD	Numeric	15	Points Y coordinate	N/A	R
Z_COORD	Numeric	7	Points Z elevation coordinate in feet. Height above mean sea level.	N/A	O
Comments	String	100	Comments or notes	N/A	O

1.4 Data Format

The data format provided will need to be in an enterprise geodatabase format that can be interpreted by commercial GIS software. A geodatabase schema including domains can be provided free upon request by contacting the State of Nebraska, Office of the CIO GIS Shared Services.

Tabular data will need to be provided in MS ACCESS, DBF, or MS SQL formats.

1.5 Maintenance

Addressing authorities need to be identified at the local level for approval of new addresses and assuring the addresses are implemented towards the database. This will insure that the physical location and the attribute database is updated and maintained in a timely manner. After spatial and attribute updates and/or modifications are performed to the database it shall be submitted to the appropriate entity(s) responsible for performing quality control and maintenance of the NAD.

Maintenance of address points requires capturing addresses and locations associated with new developments as soon as possible. This means mapping new structures by creating a geographic point as soon as (a) an address is assigned by the municipality and, if possible, (b) the physical location of the structure can be determined. For example, if a building permit has been issued and it includes a street address for the construction of a new residence, once a foundation is poured, then it would be possible to visit the site and capture that location.

1.5.1 Reporting Errors and Handling Updates

The reporting of errors need to be directed to specific local (city and/or county) and/or state entity(s) involved in the workflow in a timely manner. Updated spatial and attribute information in database will also need to be redistributed. The date field in the database when the last record was modified will also need to be updated to ensure proper records management and communication with others in the workflow.

1.6 Quality Control

The quality of the NAD is evaluated based on the overall functional correctness and completeness of the attribute and spatial data. The FGDC and NENA have adopted nationally recognized standards for accuracy testing of GIS data. NENA recommends that address data for use in data exchanges associated with NG-911 call processing be based on the FGDC compliant database. Refer to the FGDC United State Thoroughfare, Landmark and Postal Address Data standard and the NENA Civic Location Data Exchange Format (CLDXF) Standard for these data exchange standards.

1.6.1 Attribute Accuracy

a) Attribute fields are complete compared to source data having valid data elements, domain or range values.
b) Correct spelling in comparison of source data.
c) Standard first letter capitalized of every word and USPS capitalization of the State abbreviation.
d) Not to contain duplicate address points, each address point should be uniquely identifiable by the attributes.
e) Assure that the address points on the left or right of the street centerline are consistently either odd or even addresses.
f) The address point database has a thematic approach to accuracy. In other words, the type of address points recorded reflect the appropriate attribute values associated to that type. The data schema is setup with several field names that help qualify these relationships and thematic criteria to ensure accuracy of address point information.
g) For NG9-1-1 applications, the address for each point need to qualify and meet certain thresholds for the MSAG and ALI databases. For MSAG and ALI databases, the address for each point will need to be valid at a rate of 98 percent or better. For areas without an MSAG, the addresses in the point file will meet USPS Publication 28 standards. For the ALI database, this is determined by geocoding the addresses in the ALI database to the point layer with addresses developed for that area. Overall, the address data is consistent with source information from MSAG and ALI.
h) The correct formatting of address attributes are used in these standards and are also included in the NENA standards and abbreviations as they are found in USPS Publication 28.
i) The temporal quality is met by being current, updating appropriate attributes, and indicating the time the changes were made in the date updated field. Address points assigned early on due to missing or unknown structures may end up being incorrect later on as construction begins and structures are further identified.
j) Internal QA/QC checks for allowable domain values, summary statistics and record counts.

1.6.2 Physical Location

The quality of the physical location will be evaluated based on:

a) The placement of the address point representing it's real location and if it meets horizontal accuracy requirements. The National Standard for Spatial Data Accuracy (NSSDA) outlines a methodology for measuring positional accuracy. If additional testing is required, the NSSDA procedures outline the statistical procedures.
b) The geometric placement of the address point is consistently logical to the context of other features such as street centerlines, parcels, emergency service zones, and other address points.

1.7 Integration with other Standards

1.7.1 Street Centerline Standards (NITC 3-205)

The address elements identified in these standards shall meet the same address field relationships found in the Street Centerline Standards NITC 3-205. This is to assure the connection of street addresses and routing to address points having the same address information.

1.8 Metadata

A requirement for address point data is creating and maintaining it's metadata. The metadata for address point data will require detailing the characteristics and quality of submitted address points. Information needs to be provided to allow the user sufficient information so they can determine the data's intended purpose as well as how to access the data. The metadata requires a process description summarizing collection parameters such as: contact information, data source, scale, accuracy, projection, use restrictions, and date associated to each street centerline segment. The process description will also need to be included to describe methodology towards the deliverable products.

1.8.1 Federal Metadata

The Federal Metadata Content Standard from FGDC should be used when feasible and in every effort possible to assure high quality rigorous standards. All geospatial address point geodatabases, and their associated attribute databases should be documented with FGDC compliant metadata outlining how the data was derived, attribute field definitions and values, map projections, appropriate map scale, contact information, access and use restrictions, to name a few.

1.8.2 State Metadata

These standards need to apply to Nebraska's metadata standards located within NITC 3-201 Geospatial Metadata Standard. All metadata from address point data will need to be registered through the metadata portal at NebraskaMAP (http://NebraskaMAP.gov). All developers of Nebraska-related geospatial data are encouraged to use the site to either upload existing metadata and/or use the online tools available on the site to create the metadata for address point data.

2.0 Purpose and Objectives

2.1 Purpose

The purpose of this standard is to provide the necessary requirements for the creation, development, delivery, and maintenance of address point data to support a statewide NAD.

These standards will help ensure that address data creation and development are current, consistent, accurate, publicly accessible, and cost-effective.

2.2 Objectives

These standards will guide the statewide NAD having the following objectives:

2.2.1 Provide guidance, address database schema, and necessary workflows to state and local officials as they work, either in-house or with private contractors, to create, develop and maintain address point data. This can increase the likelihood that the data created will be suitable for the range of intended applications and likely future applications. The maintenance of address data is necessary for the data to be current and accurate.

2.2.2 Enhance coordination and program management across jurisdictional boundaries by insuring that address point data can be horizontally integrated across jurisdictional and/or project boundaries, and other framework data layers for regional or statewide applications.

2.2.3 Save public resources by facilitating the sharing of address point data among public agencies or sub-divisions of agencies by incorporating data standards and following guidelines. Data that is developed by one entity can be done in a way that is suitable to serve the multiple needs of other entities. This avoids the costly duplication of developing and maintaining similar address point data in the state.

2.2.4 Make address point data current and readily accessible to the wide range of potential users through NebraskaMAP and other necessary resources.

2.2.5 Facilitate harmonious, trans-agency and public policy decision-making and implementation by enabling multiple agencies and levels of government to access and appropriately use current address data. This can make it more likely that intersecting public policy decisions, across levels of government, will be based on the same information.

2.2.6 Lay the foundation for facilitating intergovernmental partnerships for the acquisition and development of high-quality address point data by defining standards that increase the likelihood that this data will meet the needs of multiple users.

2.2.7 Establish and promote the integration and interrelationships of address data with related NESDI framework layers through geometric placement and attributes.

3.0 Definitions

Accuracy

Absolute - A measure of the location of features on a map compared to their true position on the face of the earth.

Relative - A measure of the accuracy of individual features on a map when compared to other features on the same map.

Address

Actual or Real - The simple, everyday element that designates a specific, situs location, such as a house number or an office suite.

Range - Numbers associated with segments of a digital street centerline file that represent the actual high and low addresses at either end of each segment.

Theoretical - A location that can be interpolated along a street centerline file through geocoding software.

Vanity - A special address that is inconsistent with or an exception to the standard addressing schema.

Address matching – See Geocoding

Automatic Location Identification (ALI) - The automatic display at the PSAP of the caller's phone number, the address/location of the telephone and supplementary emergency services information of the location from which a call originates.

Attribute – The properties and characteristics of entities.

Datum – A set of values used to define a specific geodetic system.

Data Stewardship – Entity(s) responsible for developing and maintaining the data.

Entity – a data entity is any object about which an organization chooses to collect data.

Geocoding – A mechanism for building a database relationship between addresses and geospatial features. When an address is matched to the geospatial features, geographic coordinates are assigned to the address.

Geospatial feature – A point, line or polygon stored within geospatial software.

Line – A linear feature built of straight line segments made up of two or more coordinates.

Master Street Address Guide (MSAG) - A listing of streets and house number hich describes the exact spelling of streets, street number ranges, and other address elements.

National Emergency Number Association (NENA) – A professional association consisting of emergency number agencies and telephone company personnel responsible for the planning, implementation, establishing national standards, management, and administration of emergency number systems.

Nebraska Spatial Data Infrastructure (NESDI) - A framework of geospatial data layers that have multiple applications, used by a vast majority of stakeholders, meet quality standards and have data stewards to maintain and improve the data on an ongoing basis. These layers are also consistent with the Federal National Spatial Data Infrastructure (NSDI).

Point - A geospatial feature that is stored as a single X-Y coordinate pair. Some data systems store X-Y-Z coordinates, where Z represents elevation of the point above a given surface (or datum).

Projection – A map projection flattens the earth, allowing for locations to by systematically assigned new positions so that a curved surface can be represented on a flat map

Public Safety Answering Point (PSAP) - An entity operating under common management which receives 9-1-1 calls from a defined geographic area and processes those calls according to a specific operational policy.

State Plane Coordinate System - The State Plane Coordinate System is a set of 124 geographic zones or coordinate systems designed for specific regions of the United States. It uses a simple Cartesian coordinate system to specify locations rather than a more complex spherical coordinate system (the geographic coordinate system of latitude and longitude). By thus ignoring the curvature of the Earth, "plane surveying" methods can be used, speeding up and simplifying calculations. The system is highly accurate within each zone (error less than 1:10,000). Outside a specific state plane zone, accuracy rapidly declines, thus the system is not useful for regional or national mapping

Unique Identification Code – Every element is assigned an identification code, making it unique from other elements. For these standards, the first four (4) digits are the county name followed by number associated from the local addressing authority.

4.0 Applicability

4.1 State Government Agencies

State agencies that have the primary responsibility for developing and maintaining address point data for a particular jurisdiction(s) or geographic area (e.g. for counties for which it has assumed the primary role) are required to comply with the standards as described in Section 1. Those state agencies with oversight responsibilities in this area are required to ensure that their oversight guidelines, rules, and regulations are consistent with these standards.

4.2 State Funded Entities

Entities that are not State agencies but receive State funding, directly or indirectly, for address point development and maintenance for a particular jurisdiction or geographic area are required to comply with the standards as described in Section 1.

4.3 Other

Other entities, such as city and local government agencies (e.g. County Engineer, PSAPs, and municipalities) that receive state funds have the primary responsibility for developing and maintaining address point data are required to comply with the standards as described in Section 1.

5.0 Responsibility

5.1 NITC

The NITC shall be responsible for adopting minimum technical standards, guidelines, and architectures upon recommendation by the technical panel. Neb. Rev. Stat. § 86-516(6)

5.2 State Agencies

The State of Nebraska, Office of the CIO (OCIO) GIS Shared Services will be responsible for ensuring that standards and guidelines relative to development, meeting quality control

standards, and approving address points for the statewide address point database for distribution are conducted according to subsections in Section 1. The OCIO GIS Shared Services will be responsible for assuring that metadata is completed and the data is registered and available for distribution through NebraskaMAP.

5.3 Granting Agencies and Entities

State granting or fund disbursement entities or agencies will be responsible for ensuring that these standards are included in requirements related to fund disbursements as they relate to address points.

5.4 Other

Local government agencies that have the primary responsibility and authority for address naming and point placement will be responsible for ensuring that those sub-sections defined in Section 1 will be incorporated in the address point data development efforts and contracts.

6.0 Authority

6.1 NITC GIS Council

According to Neb. Rev. Stat. § 86-572(2), the GIS Council shall: Establish guidelines and policies for statewide Geographic Information Systems operations and management (a) The acquisition, development, maintenance, quality assurance such as standards, access, ownership, cost recovery, and priorities of data bases; (b) The compatibility, acquisition, and communications of hardware and software; (c) The assessment of needs, identification of scope, setting of standards, and determination of an appropriate enforcement mechanism; (d) The fostering of training programs and promoting education and information about the Geographic Information Systems; and (e) The promoting of the Geographic Information Systems development in the State of Nebraska and providing or coordinating additional support to address Geographic Information Systems issues as such issues arise.

7.0 Related Documents

7.1 NENA."NENA Next Generation 9-1-1 (NG9-1-1) Civic Location Data Exchange Format (CLDXF) Standard." NENA-STA-004. March 23, 2014. NENA Joint Data Technical/Next Generation Integration Committees, Next Generation Data Development Working Group (NGDD).

7.2 National Emergency Number Association. “NENA Information Document for Development of Site/Structure Address Point GIS Data for 9-1-1.”NENA-STA-XXX (Currently in Development), http://www.nena.org/?NG911_Project.

7.3 National Emergency Number Association. “NENA Standard for NG9-1-1 GIS Data Model.”NENA-STA-XXX (Currently in Development).

7.4 NENA GIS Data Collection and Maintenance Standards, NENA 02-014, July 17, 2007

7.5 NENA Information Document for Synchronizing Geographic Information System databases with MSAG & ALI, NENA 71-501, Version 1.1, September 8, 2009

7.6 Federal Geographic Data Committee (FGDC) United States Thoroughfare, Landmark and Postal Address Data Standard. FGDC Document Number FGDC-STD-016-2011. February 2011.

7.7 NITC 3-201 Geospatial Metadata Standard – http://nitc.ne.gov/standards/3-201.html

7.8 NITC 3-205 Street Centerline Standards. (Waiting Review and Approval)

7.9 United States Postal Service Publication 28. “Postal Addressing Standards.”

8.0 Appendices

8.1 Domains

Domains are provided for street centerline, alternate street names, and centerline points. This information provides consistency in reporting of data across multiple data sets.

SuffixAddressNumber

Domain	Description
A	A
B	B
C	C
D	D
E	E
F	F
G	G
H	H
I	I
J	J
K	K
L	L
M	M
N	N
O	O
P	P
Q	Q
R	R
S	S
T	T
U	U
V	V
W	W
X	X
Y	Y
Z	Z

PreModifier

Domain	Description
Alternate	Alternate
Archway	Archway
Behind	Behind
Business	Business
Bypass	Bypass
Center	Center
De	De
Del	Del
Drive	Drive
Entrance	Entrance
Extended	Extended
Head	Head
Historic	Historic
La	La
Le	Le
Loop	Loop
New	New
Old	Old
Olde	Olde
Our	Our
Out	Out
Private	Private
Public	Public
Spur	Spur
The	The
To	To

Direction

Domain	Description
N	North
S	South
E	East
W	West
NE	Northeast
NW	Northwest
SE	Southeast
SW	Southwest

SeperatorElement

Domain	Description
And	And
At	At
By The	By The
Con	Con
De Las	De Las
For	For
For The	For The
In The	In The
Of	Of
Of The	Of The
On The	On The
The	The
To	To
Y	Y

PostModifier

Domain	Description
Access	Access
Alternate	Alternate
Approach	Approach
Business	Business
Bypass	Bypass
Center	Center
Central	Central
Centre	Centre
Company	Company
Concourse	Concourse
Connector	Connector
Crossing	Crossing
Crossover	Crossover
Cut Off	Cut Off
Cutoff	Cutoff
Dock	Dock
End	End
Entrance	Entrance
Executive	Executive
Exit	Exit
Extended	Extended
Extension	Extension
Industrial	Industrial
Interior	Interior
Loop	Loop
Overpass	Overpass
Private	Private
Public	Public
Ramp	Ramp
Scenic	Scenic
Service	Service
Spur	Spur
Terminal	Terminal
Transverse	Transverse
Underpass	Underpass

State

Domain	Description
NE	Nebraska
CO	Colorado
WY	Wyoming
SD	South Dakota
IA	Iowa
MO	Missouri
KS	Kansas

PointType

Domain	Description
1	Primary Structure
2	Primary Property Entrance
3	Secondary Structure
4	Secondary Property Entrance
5	Parcel Centroid
6	Other location in Parcel
7	Site
8	Geocoded from Street Centerlines
9	Other

AddressSource

Domain	Description
County911AL	County 911 Address List
CountyAP	County Address Points
CountyBF	County Building Footprint
CountyCP	County Common Places
CountyParcels	County Parcels
GDRAP	GDR Address Points
MunicipalAP	Municipal Address Points
MunicipalParcels	Municipal Parcels
StateAP	State Address Points
Other	Other

PrimaryPoint

Domain	Description
Y	Yes
N	No

StreetType (for both PreType and PostType) Additional commonly used street suffixes and abbreviations are located within the USPS Publication 28.

Domain	Description
Acrs	Acres
Aly	Alley
Anx	Annex
Arc	Arcade
Ave	Avenue
Bay	Bay
Bch	Beach
Bg	Burg
Bgs	Burgs
Blf	Bluff
Blfs	Bluffs
Blvd	Boulevard
Bnd	Bend
Br	Branch
Brg	Bridge
Brk	Brook
Brks	Brooks
Btm	Bottom
Byp	Bypass
Byu	Bayou
Chas	Chase
Cir	Circle
Cirs	Circles
Clb	Club
Clf	Cliff
Clfs	Cliffs
Clos	Close
Cmn	Common
Cmns	Commons
Cnrs	Corners
Cor	Corner
Cors	Corners

StreetType, continued

County Hwy	County Road
County Rte	County Touring Route
Cp	Camp
Cpe	Cape
Cres	Crescent
Crk	Creek
Crse	Course
Crst	Crest
Cswy	Causeway
Ct	Court
Ctr	Center
Ctrs	Centers
Cts	Courts
Curv	Curve
Cv	Cove
Cvs	Coves
Cyn	Canyon
Dl	Dale
Dm	Dam
Dr	Drive
Drs	Drives
Drwy	Driveway
Dv	Divide
End	End
Est	Estate
Ests	Estates
Expy	Expressway
Ext	Extension
Exts	Extensions
Fall	Fall
Farm	Farm
Fld	Field
Flds	Fields
Fls	Falls
Flt	Flat
Flts	Flats
Frd	Ford
Frds	Fords
Frg	Forge
Frgs	Forges
Frk	Fork
Frks	Forks
Frst	Forest
Fry	Ferry
Ft	Fort
Fwy	Freeway
Gate	Gate
Gdn	Garden
Gdns	Gardens
Gln	Glen
Glns	Glens
Grds	Grounds
Grn	Green
Grns	Greens
Grv	Grove
Grvs	Groves
Gtwy	Gateway
Hbr	Harbor
Hbrs	Harbors
Hl	Hill
Hls	Hills
Holw	Hollow
Hrbr	Harbor
Hts	Heights
Hvn	Haven
Hwy	Highway
I	Interstate
Inlt	Inlet
Is	Island
Isle	Isle
Iss	Islands
Jct	Junction
Jcts	Junctions
Knl	Knoll
Knls	Knolls
Ky	Key
Kys	Keys
Land	Land
Lck	Lock
Lcks	Locks
Ldg	Lodge
Lf	Loaf
Lgt	Light
Lgts	Lights
Lk	Lake
Lks	Lakes
Ln	Lane
Lndg	Landing
Loop	Loop
Mall	Mall
Mdw	Meadow
Mdws	Meadows
Mews	Mews
Ml	Mill
Mls	Mills
Mnr	Manor
Mnrs	Manors
Msn	Mission
Mt	Mount
Mtn	Mountain
Mtns	Mountains
Mtwy	Motorway
Nck	Neck
Opas	Overpass
Orch	Orchard
Otlk	Outlook
Oval	Oval
Ovlk	Overlook
Park	Park
Pass	Pass
Path	Path
Pike	Pike
Pkwy	Parkway
Pl	Place
Pln	Plain
Plns	Plains
Plz	Plaza
Pne	Pine
Pnes	Pines
Pr	Prairie
Prom	Promenade
Prt	Port

StreetType, continued

Prts	Ports
Psge	Passage
Pt	Point
Pts	Points
Radl	Radial
Ramp	Ramp
Rd	Road
Rdg	Ridge
Rdgs	Ridges
Rds	Roads
Rdwy	Roadway
Rise	Rise
Riv	River
Rnch	Ranch
Row	Row
Rpd	Rapid
Rpds	Rapids
Rst	Rest
Rte	Route
Rue	Rue
Run	Run
Shls	Shoals
Sho	Shoal
Shr	Shore
Shrs	Shores
Skwy	Skyway
Smt	Summit
Spg	Spring
Spgs	Springs
Spur	Spur
Sq	Square
Sqs	Squares
St	Street
Sta	Station
State Hwy	State Touring Highway
State Pkwy	State Parkway
State Rte	State Route
Stra	Stravenue
Strm	Stream
Sts	Streets
Ter	Terrace
Tlpk	Trailer Park
Tpke	Turnpike
Trak	Track
Trce	Trace
Trfy	Trafficway
TrkTrl	Truck Trail
Trl	Trail
Trlr	Trailer
Trwy	Thruway
Tunl	Tunnel
Turn	Turn
Twrs	Towers
Un	Union
Uns	Unions
Upass	Underpass
US Hwy	Federal Highway
US Rte	US Route
Vale	Vale
Via	Viaduct
Vis	Vista
Vl	Ville
Vlg	Village
Vlgs	Villages
Vls	Villas
Vly	Valley
Vlys	Valleys
Vw	View
Vws	Views
Walk	Walk
Wall	Wall
Way	Way
Ways	Ways
Wds	Woods
Wels	Wells
Wl	Well
Wood	Wood
Xing	Crossing
Xrd	Crossroad
Xrds	Crossroads

UnitType

Domain	Description
APT	Apartment
BSMT	Basement
	Blank, unable to determine
BLDG	Building
DEPT	Department
FL	Floor
FRNT	Front
HNGR	Hanger
KEY	Key
LBBY	Lobby
LOT	Lot
LOWR	Lower
OFC	Office
PH	Penthouse
PIER	Pier
REAR	Rear
RM	Room
SIDE	Side
SLIP	Slip
SPC	Space
STOP	Stop
STE	Suite
TRLR	Trailer
UNIT	Unit
UPPR	Upper

CountyFIPS

Domain	Description	Domain	Description	Domain	Description
1	Adams	63	Frontier	125	Nance
3	Antelope	65	Furnas	127	Nemaha
5	Arthur	67	Gage	129	Nuckolls
7	Banner	69	Garden	131	Otoe
9	Blaine	71	Garfield	133	Pawnee
11	Boone	73	Gosper	135	Perkins
13	Box Butte	75	Grant	137	Phelps
15	Boyd	77	Greeley	139	Pierce
17	Brown	79	Hall	141	Platte
19	Buffalo	81	Hamilton	143	Polk
21	Burt	83	Harlan	145	Red Willow
23	Butler	85	Hayes	147	Richardson
25	Cass	87	Hitchcock	149	Rock
27	Cedar	89	Holt	151	Saline
29	Chase	91	Hooker	153	Sarpy
31	Cherry	93	Howard	155	Saunders
33	Cheyenne	95	Jefferson	157	Scotts Bluff
35	Clay	97	Johnson	159	Seward
37	Colfax	99	Kearney	161	Sheridan
39	Cuming	101	Keith	163	Sherman
41	Custer	103	Keya Paha	165	Sioux
43	Dakota	105	Kimball	167	Stanton
45	Dawes	107	Knox	169	Thayer
47	Dawson	109	Lancaster	171	Thomas
49	Deuel	111	Lincoln	173	Thurston
51	Dixon	113	Logan	175	Valley
53	Dodge	115	Loup	177	Washington
55	Douglas	117	McPherson	179	Wayne
57	Dundy	119	Madison	181	Webster
59	Fillmore	121	Merrick	183	Wheeler
61	Franklin	123	Morrill	185	York

9th October, 2014

Rick.becker@nebraska.gov
NITC

Re: Comments regarding NITC 3-206: Address Standards

Dear Mr. Becker and the Technical Panel of the Nebraska Information Technology Commission:

As both a vendor working in this arena and as a resident of the State of Nebraska that utilizes E911 services GIS Workshop, Inc. (GISW) and its employees appreciate the hard work and dedication that have gone into creating and drafting these standards. GISW thanks you for the opportunity to comment and provide input on these important standards.

Where possible we will attempt to reference the appropriate page number and section on the standards document. Comments and questions that don't reference a particular section and are more general in nature will be confined to the end of this document.

Page 4, 1.2.2.1 Digitizing
The document refers to several elements related to map accuracy. The primary references being "Capture Scale for digitizing: 1:2400" and "…verified horizontal accuracy requirements for spatial resolution (12 inch minimum)…" Are we to assume that the document is referring to National Map Accuracy Standard (NMAS) 1:2400 mapping accuracy requirements per the National Standard for Spatial Data Accuracy (NSSDA)? If so, we recommend this be explicitly stated AND the actual statistical test for this accuracy be stated somewhere in the document and referenced in the document. This will help draw attention to the (well intentioned) but unnecessarily high accuracy requirements. In addition it will help GIS practitioners perhaps more completely understand the statistical requirements of the NSSDA. Note: section 1.6.2 goes a little further in expressing accuracy requirements, but we feel it is still not enough.

Page 4, 1.2.2.1 Digitizing
"…The NAIP imagery therefore does not meet these accuracy standards"

We applaud the effort to increase the accuracy of digital products. However, if NITC (via these standards) forces the acquisition of leaf off, higher accuracy imagery per the standards, this will cost NE tax payers several million dollars per acquisition and this expenditure will need to occur every few years. The most likely method of building these data will be manual placement of points on top of structures via imagery. The differences in accuracy between NAIP accuracy standards and the proposed standards for purposes of database construction to serve NextGen 911 are negligible

The NAIP imagery provides an excellent, "free" source of imagery that is updated periodically by the federal government. As an agricultural state, Nebraska is unlikely to be cut from the NAIP program, thus this "free" imagery will be available for many years to come.

We recommend the NITC technical panel revert to accuracy standards that allow use of the free NAIP imagery, but maintain a recommendation to use higher accuracy imagery where it is already available.

Page 6, 1.3.1 General Address Components
"Each jurisdiction shall develop a master address database that can be referenced when new street names are created or assigned so that duplications are avoided."

- What format should this "master address database" be in?
- What should it contain?
- Which jurisdiction does NITC recommend maintain it? The PSAP? The State? The County? The PSAP? The incorporated cities, towns and villages?
- Most counties in Nebraska already contain duplication of street names because of individual towns within a county/PSAP each containing "1st Street", "5th Avenue" etc. How does NITC propose these existing cases are handled?

Page 7, 1.3.2 Unique Identification Code
"A unique identifier is required for the statewide address point database."
Although this sounds useful initially, the proposed standard will quickly become a logistical nightmare without further recommendations from the NITC for jurisdictions to follow regarding the implementation and maintenance of these data elements:

- May a unique ID be reused? If so, how and when?
- What are the rules for the "stickiness" of a unique ID? For example, what if a property is demolished and later rebuilt in the same or similar physical location with the same address, does the ID remain (and therefore history) or should it receive a new ID?

We recommend some basic guidelines are considered and offered for comment…otherwise NITC runs the risk for numerous slightly different processes for the maintenance of the proposed ID scheme will result across the state, causing confusion and effecting the efficacy of the proposed standard.

Page 10, 1.4 Data Format
"The data format will need to be in an Esri Enterprise Geodatabase format…"

Historically, NITC and the State of Nebraska have employed a "vendor neutral" stance with regards to GIS data. As an Esri "Gold" business partner and long time Esri data user, this standard certainly assists GISW! However it amounts to a "sponsorship" of a private corporation by the State of Nebraska. We might add it is also becoming increasingly difficult to move data in and out of these proprietary formats and maintain ALL the information. By its nature, the proprietary Esri Enterprise Geodatabase contains functions and capabilities that no other format does…thus making export/import of all the information within the database impossible.

402.436.2150
4949 NW 1st Street, Lincoln NE 68521

We recommend that NITC consider additional suitable data formats so as to not favor one particular vendor.

Page 10, 1.5 Maintenance
"Addressing authorities need to be identified at the local level for approval of new addresses and assuring the addresses are implemented towards the database. This will insure that the physical location and the attribute database is updated and maintained in a timely manner."

- Identification of the numerous addressing authorities in NE is just the beginning. We believe only a thorough and ongoing training and education program will equip the "addressing authorities" with the knowledge and skills to comply with these standards. What does NITC propose to combat this?
- What would the NITC consider a "timely manner" for providing updates to the central database by the jurisdiction?

"This means mapping new structures by creating a geographic point as soon as (a) an address is assigned by the municipality and, if possible, (b) the physical location of the structure can be determined. For example, if a building permit has been issued and it includes a street address for the construction of a new residence, once a foundation is poured, then it would be possible to visit the site and capture that location."

Just an informational note…there are a handful of jurisdictions in NE that do not have zoning and may not issue building permits. Therefore address assignment is hit and miss so to speak. In those jurisdictions where they DO have zoning/building permits, the general convention is that a permit MUST be issued and an address MUST be issued before any construction activity can begin (including simple dirt work). The address must be clearly displayed at the construction site before construction begins. This may render comment "b" above meaningless as address assignment always occurs before permit issuance and construction occurs in NE or we may simply be misreading the meaning of section b.

Page 12 1.6.2 Physical Location
"The quality of the physical location will be evaluated based on: a) The placement of the address point representing it's real location and if it meets horizontal accuracy requirements. The National Standard for Spatial Data Accuracy (NSSDA) outlines a methodology for measuring positional accuracy. If additional testing is required, the NSSDA procedures outline the statistical procedures."

This comment is a follow on from the first comment in the document regarding the overreaching accuracy requirement in section 1.2.2.1. As one would expect, probably the most common way to check accuracy requirements of the data per the NSSDA would be to use survey grade GPS (mapping grade may or may not be guaranteed to reach the accuracy requirement) and measure a subset of point locations relative to their locations on the imagery. Surely this would entail climbing up onto the roofs of structures to accurately measure the location of the point data using a GPS? Ergo: the accuracy requirement specified in 1.2.2.1 is over reaching not only

because a human or machine digitizer will hit the roof top using 1:24000 NAIP or using expensive 1:2400 “specialty” imagery, but the means to test the accuracy is simply not possible!

General Comments:

- When does the NITC propose to adopt these standards? The documentation only refers to the public comment period.
- When does the NITC propose these standards become enforceable? Will existing data be “grandfathered in”? Will there be a grace period for adoption? These standards in their current form will put a heavy fiscal burden on those PSAPs/counties that have already constructed an address point database and in fact will penalize those PSAPs/counties that have chosen to move forward with this more accurate type of database as they will be forced to rebuild.
- The name “NAD” as it stands for “Nebraska Address Database” is:
    a. too easily confused with NAD (North American Datum)
    b. not an accurate description of the database

  Something along the lines of “Nebraska Address Point Database” is more appropriate.

Thank you once again for inviting our participation. If you should have any further questions, please contact me using the information below.

Sincerely

Claire Inbody
Executive Vice President, Technical Services
GIS Workshop, Inc.

Email: cinbody@gisworkshop.com
Tel: 402 436 2150

Request for Waiver

Agency Name
Nebraska Department of Economic Development
301 Centennial Mall South
Lincoln, NE 68509

Contact Person
Kate Ellingson
Director of Marketing and Public Relations
kate.ellingson@nebraska.gov
402-471-3749

Title of NITC Standard and Guidelines
NITC 7-104: Web Domain Name Standard

Description of the problem or issue
We request waivers for the custom URLs associated with our Department's websites.

Description of agency's preferred solution, including additional information and justification showing good cause for the requested waiver.

- ***Established programs and existing marketing materials***. We have invested substantial time and money in marketing the state of Nebraska and all of our programs. Materials feature existing custom URL websites. We've been using these custom URLs for many years. Many of our partner organizations, including overseas businesses would be adversely impacted by this change. We also have numerous marketing materials in other languages that would all be affected.

- ***Helps with image recognition***. Our custom URLs help our clients remember the different web addresses easier.

- ***Helps make our programs more visible in search results***. It's easier and more convenient for clients to find us when they can type the program name into a search engine and the website is similar to the program name. This also significantly improves our position in search rankings which is critical for economic development marketing efforts.

- ***Better for Search Engine Optimization (SEO)***. It's crucial for SEO because any of our Google rankings and the links to our site are all tied to our domain. If we switch domain names, we may encounter SEO implications and experience potential damage to our search engine rankings. Switching domain names may cause international issues, example firewall issues in China.

- ***International access would be impaired by a ".gov" URL.*** The Department maintains offices in Japan and China. Our International Trade and Investment work requires a robust web presence. Specifically ".gov" URLs are difficult to access (often blocked) for individuals seeking to access our site and materials from these and other foreign locations.

We appreciate you taking the time to consider and understand why we have custom URLs.

Thank you.

Mr. Becker

At the request of Royce Schaneman, the Nebraska Wheat Board's executive director, I am forwarding to you a request from NWB for a waiver of compliance for an NITC Standard regarding websites. Responses to the waiver request questions are listed below in red. If you have any questions, or would need anything further from NWB in order to place this request under consideration, please feel free to contact our office. Thank you.

- Agency name
  The Nebraska Wheat Development, Utilization and Marketing Board, commonly referred to as the Nebraska Wheat Board or NWB
- Name, title, and contact information for the agency contact person regarding the request
  Royce Schaneman, Executive Director
  (402) 471-2358
  royce.schaneman@nebraska.gov
- Title of the NITC Standards and Guidelines document at issue
  NITC 7-104: Web Domain Name Standard
- Description of the problem or issue

1. Regarding section 1.4: NWB shares a website with the Nebraska Wheat Growers Association (NWGA), a non-profit, membership based organization as the two organizations share similar missions of promoting the wheat industry and aiding wheat farmers. In addition, sharing the site aids NWGA with a limited budget, to maintain a digital presence. The two organizations have always shared a website. NWGA originally purchased the domain name, while NWB renewed the rights when the original purchase term was up. Should the domain switch to Nebraska.gov, NWGA would not be able to place the new site on any promotional materials, as it is not a government entity. It's options would be to not advertise a website (not a good option in a digital age) or to create its own separate website (A difficult option for a limited-budget organization, which would also result in increased confusion as the association's stakeholders are used to the shared site format. In addition multiple materials or information like crop reports and educational materials provided on the website are targeted to the audiences for both NWGA and NWB). A third option, that would be preferred is detailed in the corresponding request below.
2. Regarding section 1.4 and 1.5: The December 31, 2014 deadline falls in the middle of the fiscal year. A limited budget has been set aside for promotional materials. All promotional and educational materials currently in the office have the website listed as www.nebraskawheat.com. NWB does not have the budget to redo all these materials within this fiscal year. Knowing the change will be needed, NWB could create room in the budget for FY 15-16.
3. Regarding section 1.5: NWB works with a contracted, private vendor to develop and update parts of the website content, including managing the various domains currently owned by NWB and NWGA. NWB requires time to allow them to adopt changes, and account for any other domains that are owned.

- Description of the agency's preferred solution, including a listing of the specific requirement(s) for which a waiver is requested
  1. The site maintained by both NWB and NWGA to this time has been www.nebraskawheat.com. For the purposes of promoting *on NWGA materials only* (NWB would use the Nebraska.gov) we would like to maintain use of the domain

nebraskawheat.com, in the format of routing those who would type in into their browsers to the Nebraska.gov version, where the content would be hosted.

2. Waiver to extend compliance deadline for NWB to January 1, 2016. NWB would purchase/secure the Nebraska.gov domain by December 31, 2014, but would like to extend the deadline to publicly promote until January 1, 2016. This would give NWB the time to budget for updated promotional and educational materials 15-16, as well as develop the new materials, order them, and have the materials produced and shipped to the office for distribution.
3. NWB would secure rights to the required .gov domains, e.g. nebraskawheat.ne.gov and/or nebraskawheat.nebraska.gov by the December 31, 2014 deadline. However, to ensure everything rolls over correctly, and to prevent confusion of having them release the new site domain when it matches none of the marketing materials, NWB requests a waiver of compliance on full utilization of the domain name until January 1, 2016.

- Any additional information and justification showing good cause for the requested waiver

NWB is a non-code state agency. We operate solely with checkoff dollars and R&D fees. This means we are held accountable by the farmers who pay the checkoff. It would be extremely difficult to justify to them, the throwing away of promotional materials in stock (and thus funds already spent) simply because the materials carry the www.nebraskawheat.com website. Extending the compliance deadline through January 1, 2016 would allow NWB to make use of the materials on hand, rather than wasting them.

Also, NWB and NWGA have put out significant quantities of both promotional materials and items, and educational materials over the last several years. All materials passed out contain the www.nebraskawheat.com. Allowing the use of the old site, only as a router to the new domain, would ensure the stakeholders who have those materials, are still able to access our website and the desired content.

Caroline Brauer
Ag Promotion Coordinator - Nebraska Wheat Board