

04-24-2015 LETTING ITEM 086
FOR INDEX OF SHEETS, SEE SHEET 2

FOR HIGHWAY STANDARDS, SEE SHEET 2

MICROFILMED: _____

REEL NUMBER: _____

AWARDED: _____

RESIDENT ENGINEER: _____

AS BUILT CHANGES WERE MADE ON THE FOLLOWING SHEETS:

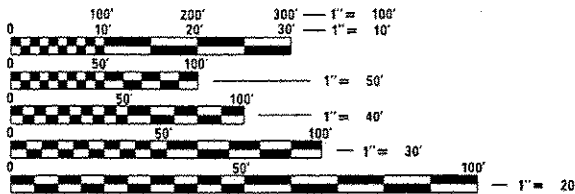
DESIGN DESIGNATION

FAI 64
INTERSTATE
ADT = 101,500 EB & WB (2011)

MISSOURI AVE
MAJOR COLLECTOR
ADT = 25 (2011)

PROJECT DESCRIPTION

Project consists of rehabilitation of the Missouri Avenue Deep Well Facility and Pump Station. Work to include construction of a horizontal collector well, new well house building, force main, detention basin, rehabilitation of the existing pump station building, new surface water pumps, storm sewers, PCC parking lot, and other miscellaneous items related to the improvements.



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123
OR 811

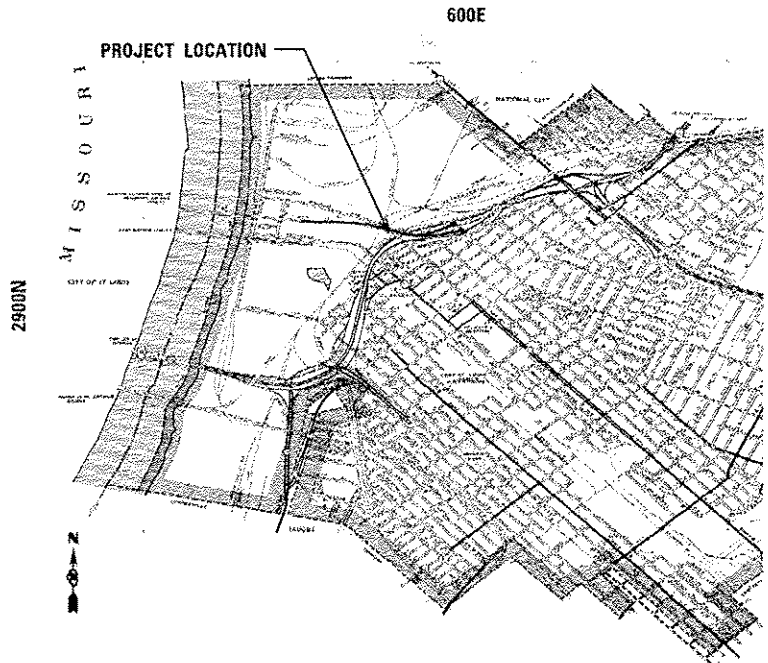
PROJECT ENGINEER: PATTI LEBEAU 618-346-3179
PROJECT MANAGER: PHILLIP SAWYER 618-346-3275
SQUAD LEADER: MICHAEL PRESTON 618-346-3143
CONTRACT NO. 76G99

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
**PROPOSED
HIGHWAY PLANS**

F.A.I. ROUTE 55 /70 /64 (I-55 /70 /64)
SECTION 82-4T-1

MISSOURI AVENUE DEEP WELL FACILITY
WATER MANAGEMENT SYSTEM IMPROVEMENTS
ST. CLAIR COUNTY

C-98-025-14

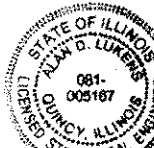


LOCATION MAP

0 1/2 1 mile
GROSS /NET LENGTH = N/A



Deborah E. Naught 1/12/15
DEBORAH E. NAUGHT
REGISTERED ARCHITECT
STATE OF ILLINOIS NO. 001-016272
LICENSE EXPIRES NOVEMBER 30, 2016
SHEETS: 67-74



Alan D. Lukens 1/13/15
ALAN D. LUKENS
REGISTERED STRUCTURAL ENGINEER
STATE OF ILLINOIS NO. 081-005167
LICENSE EXPIRES NOVEMBER 30, 2016
SHEETS: 75-135



Stephen E. Himmell 1/13/15
STEPHEN E. HIMMELL
REGISTERED PROFESSIONAL ENGINEER
STATE OF ILLINOIS NO. 062-037176
LICENSE EXPIRES NOVEMBER 30, 2015
SHEETS: 136-144



John J. Neyens 1/13/15
JOHN J. NEYENS
REGISTERED PROFESSIONAL ENGINEER
STATE OF ILLINOIS NO. 062-063295
LICENSE EXPIRES NOVEMBER 30, 2015
SHEETS: 136-137, 148-185



Steve E. Bange 1/12/15
STEVE E. BANGE
REGISTERED PROFESSIONAL ENGINEER
STATE OF ILLINOIS NO. 062-053338
LICENSE EXPIRES NOVEMBER 30, 2015
SHEETS: 1-42, 55-66

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55/70/64	82-4T-1	ST. CLAIR	185	1
ILLINOIS			CONTRACT NO. 76G99	

D-98-025-14



LOCATION OF SECTION INDICATED THIS: -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
SUBMITTED *Jan 28 2015*
Jeffrey T. K...
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER
May 20 2015
John D. Baranzelli P.E.
acting ENGINEER OF DESIGN AND ENVIRONMENT
May 20 2015
Omer Osman P.E.
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

Plans prepared by:
KLINGNER & ASSOCIATES, P.C.
Engineers • Architects • Surveyors
618 North 24th Street, Quincy, IL Ph (217) 223-3070 • Fax (217) 223-3003
4515 Poyne Street, Hannibal, MO Ph (573) 221-4020 • Fax (573) 221-4012
610 N. 4th Street, Suite 100, Burlington, IA Ph (319) 752-3600 • Fax (319) 752-3005
49 North Prairie Street, Galesburg, IL Ph (309) 343-4942 • Fax (309) 341-3781
Internet Address: www.klingner.com

IL DESIGN FIRM NO.: 1842738

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

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280001-07	TEMPORARY EROSION CONTROL SYSTEMS
420001-08	PAVEMENT JOINTS
424001-08	PERPENDICULAR CURB RAMPS FOR SIDEWALKS
442201-03	CLASS C AND D PATCHES
542001-04	CONCRETE END SECTIONS FOR PIPE CULVERTS 15" (375 MM) THRU 84" (2100 MM) DIAMETER
542006-01	MULTIPLE CONCRETE END SECTIONS FOR PIPE CULVERTS 15" (376MM) THRU 84" (2100 MM) DIAMETER
542311-05	TRAVERSABLE PIPE GRATE
601101-01	CONCRETE HEADWALL FOR PIPE DRAIN
602301-04	INLET, TYPE A
602411-04	MANHOLE, TYPE A, 7' (2.1 M) DIAMETER
602601-03	PRECAST REINFORCED CONCRETE FLAT SLAB TOP
602701-02	MANHOLE STEPS
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604036-03	GRATE, TYPE 8
606001-06	CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND CUTTER
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635011-02	REFLECTOR MARKER AND MOUNTING DETAILS
664001-02	CHAIN LINK FENCE
701101-04	OFF-RD OPERATIONS, MULTILANE 15' (4.5 m) TO 24' (600 mm) FROM PAVEMENT EDGE
701106-02	OFF-RD OPERATIONS, MULTILANE MORE THAN 15' (4.5 m) AWAY
701400-08	APPROACH TO LANE CLOSURE, FREEWAY/EXPRESSWAY
701401-09	LANE CLOSURE, FREEWAY/EXPRESSWAY
701402-10	LANE CLOSURE, FREEWAY/EXPRESSWAY, WITH BARRIER
701406-09	LANE CLOSURE, FREEWAY/EXPRESSWAY, DAY OPERATIONS ONLY
701411-09	LANE CLOSURE, MULTILANE, AT ENTRANCE OR EXIT RAMP, FOR SPEEDS > 45 MPH
701428	TRAFFIC CONTROL, SETUP AND REMOVAL, FREEWAY/EXPRESSWAY
701611	URBAN HALF ROAD CLOSURE, MULTILANE, 2W WITH MOUNTABLE MEDIAN
701801-05	LANE CLOSURE, MULTILANE 1W OR 2W CROSSWALK OR SIDEWALK CLOSURE
701901-04	TRAFFIC CONTROL DEVICES
704001-07	TEMPORARY CONCRETE BARRIER
720001-01	SIGN PANEL MOUNTING DETAILS
720011-01	METAL POSTS FOR SIGNS, MARKERS AND DELINEATORS
728001-01	TELESCOPING STEEL SIGN SUPPORT
729001-01	APPLICATIONS OF TYPES A AND B METAL POSTS (FOR SIGNS & MARKERS)
814001-03	HANDHOLES
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878001-10	CONCRETE FOUNDATION DETAILS
B.L.R. 10-06	PCC PAVEMENT SPECIAL (NONREINFORCED)
B.L.R. 22-07	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS

GENERAL NOTES

1. THE STANDARDS AND REVISION NUMBERS LISTED SHALL APPLY TO THIS PROJECT.

2. WHERE SECTION OR SUB-SECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL PROPERTY MARKERS AND MONUMENTS UNTIL THE OWNER, AN AUTHORIZED SURVEYOR OR AGENT HAS WITNESSED OR OTHERWISE REFERENCE THE LOCATION.

3. ILLINOIS STATE LAW REQUIRES A 48-HOUR NOTICE BE GIVEN TO UTILITY BEFORE DIGGING. FIELD MARKING OF FACILITIES MAY BE OBTAINED BY CONTACTING J.U.L.I.E. OR FOR NON-MEMBERS, THE UTILITY COMPANY DIRECTLY. AGENCIES KNOWN TO HAVE FACILITIES IN THE AREA OF THIS PROJECT ARE:

USIC LOCATING SERVICES - ST LOUIS

* AMEREN IP

* AMEREN-UE

* CITY OF EAST ST. LOUIS

* ILLINOIS AMERICAN WATER CO.

* CHARTER COMMUNICATIONS, INC

* NETWORKS, 360.

* LEVEL 3 COMMUNICATIONS, LLC

* LIGHTCORE

* MCI

* VERIZON BUSINESS

* AT&T ILLINOIS

* QWEST COMMUNICATIONS

* MCLEOD USA TELECOMMUNICATIONS, INC.

* METRO EAST SANITARY DISTRICT

MEMBERS OF J.U.L.I.E. (800) 892-0123 ARE INDICATED BY *.
NON-J.U.L.I.E. MEMBERS MUST BE NOTIFIED INDIVIDUALLY.

4. THE DEPARTMENT STRONGLY ENCOURAGES THE PRIME CONTRACTOR AND THEIR APPROVED SUB-CONTRACTORS TO HIRE MINORITY, WOMEN AND DISADVANTAGED INDIVIDUALS FROM ITS FEDERALLY FUNDED HIGHWAY CONSTRUCTION CAREERS TRAINING PROGRAM (HCCTP) TO HELP MEET WORKFORCE AND TRAINEE GOALS. THIS PROGRAM IS TRAINING MINORITIES, WOMEN AND DISADVANTAGED INDIVIDUALS IN HIGHWAY CONSTRUCTION SKILLS, E.G., MATH FOR THE TRADES, JOB READINESS, TECHNICAL SKILLS COURSEWORK (CARPENTRY, CONCRETE FLATWORK, BLUEPRINT READING, SITE PLANS, SITE WORK, TOOLS USE, ETC) AND OSHA 10 HOUR CERTIFICATION, TO PREPARE THEM FOR A CAREER IN THE HIGHWAY CONSTRUCTION TRADES. GRADUATES ARE WELL-TRAINED AND READY TO BECOME PRODUCTIVE ENTRY-LEVEL CONSTRUCTION WORKERS. CONTACT THE DISTRICT 8 EEO OFFICE AT 618-346-3360 AND/OR THE HCCTP COORDINATOR AT 618-874-6528 TO LEARN MORE ABOUT THE PROGRAM AND FOR ASSISTANCE IN MEETING WORKFORCE AND TRAINEE GOALS.

5. THE CONTRACTOR SHALL VISIT THE SITE AND FAMILIARIZE HIMSELF WITH THE EXISTING CONDITIONS, SITE ACCESS, POWER SUPPLY AND OTHER ITEMS THAT AFFECT THE CONTRACT AND THE CONSTRUCTION OF THE IMPROVEMENTS.

6. PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING STRUCTURE HAVE BEEN TAKEN FROM EXISTING PLANS AND ARE SUBJECT TO NOMINAL CONSTRUCTION VARIATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY SUCH DIMENSIONS AND DETAILS IN THE FIELD AND MAKE NECESSARY APPROVED ADJUSTMENTS PRIOR TO CONSTRUCTION OR ORDERING OF MATERIALS, SUCH VARIATIONS SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION OR A CHANGE IN THE SCOPE OF THE WORK.

7. THE LOCATIONS OF UNDERGROUND UTILITIES AS SHOWN ON THESE PLANS HAVE BEEN OBTAINED BY FIELD SURVEYS AND SEARCHES OF AVAILABLE RECORDS. IT IS BELIEVED THAT THIS DATA IS ESSENTIALLY CORRECT, BUT THE DEPARTMENT AND OTHERS ASSOCIATED WITH THESE PLANS DO NOT GUARANTEE THEIR ACCURACY OR COMPLETENESS. THE CONTRACTOR WILL BE REQUIRED TO VERIFY THE EXACT LOCATION OF EACH FACILITY WITH THE UTILITY COMPANY WHEN THE POTENTIAL EXISTS FOR INVOLVEMENT AND SHALL TAKE DUE CARE IN ALL PHASES OF THE CONSTRUCTION TO PROTECT ANY SUCH FACILITIES WHICH MAY BE AFFECTED BY THE WORK. ANY DAMAGES TO THE UTILITIES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

8. ALL MECHANICAL AND ELECTRICAL EQUIPMENT REMOVED, EXCEPT THE SALVAGE ITEMS AS SPECIFIED IN SUBSECTION 2.1.1 OF SECTION 28, SHALL BECOME THE PROPERTY OF CONTRACTOR. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REMOVE AND DISPOSE OF SAME. CONTRACTOR SHALL COORDINATE WITH DISTRICT 8 FOR ALL EQUIPMENT TO BE REMOVED.

9. IN GENERAL, PRIOR TO CUTTING OPENINGS IN THE EXISTING BUILDING REINFORCED CONCRETE SLABS AND WALLS, THE CONTRACTOR SHALL IDENTIFY EXACT LOCATIONS OF MAIN REINFORCING BARS (REBAR DETECTOR OR OTHER APPROVED PROCEDURE). THE CONTRACTOR SHALL RECEIVE APPROVAL FROM THE ENGINEER PRIOR TO CUTTING REINFORCED CONCRETE.

10. THE CONTRACTOR SHALL COMPLY WITH APPLICABLE OSHA REGULATIONS WHILE AT THE CONSTRUCTION SITE.

11. ALL EXPOSED CONCRETE CORNERS SHALL BE CHAMFERED 3/4" EXCEPT AT SIDEWALKS AND CURBS WHERE ROUNDED CORNERS ARE REQUIRED.

12. CLASS S1, CONCRETE SHALL BE USED THROUGHOUT.

13. REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-31, M-42 OR M322 GRADE 60.

14. FOR BACKFILLING AND COMPACTION SEE STANDARD SPECIFICATIONS.
- GENERAL NOTES (CONT)
15. STRUCTURAL DESIGN DATA:

REINFORCING STEEL f_y = 60,000 psi

CONCRETE f'_c = 3,500 psi 14 DAYS

STRUCTURAL STEEL f_y = 36.0 ksi

MINIMUM SLAB AND STAIR LIVE LOADING = 100 psf

MINIMUM ROOF LIVE LOADING = 25 psf

16. UNLESS OTHERWISE INDICATED ALL ITEMS AND WORK SHOWN ON THESE SHEETS ARE PROPOSED NEW ITEMS AND WORK.

17. THE EXISTING PUMP STATION FACILITY SHALL REMAIN IN CONTINUOUS OPERATION DURING CONSTRUCTION. ONLY ONE PUMP MAY BE REMOVED FROM SERVICE AT A TIME. THE MINIMUM PUMPING CAPACITY OF THE EXISTING STATION MUST BE MAINTAINED AT ALL TIMES IS 68,700 gpm.

18. NOTE THAT DURING CONSTRUCTION THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE PUMPING STATION. SHORT-TERM SHUTDOWN WILL BE PERMITTED WITH SPECIFIC WRITTEN PERMISSION (SEE SPECIFICATIONS).

19. COORDINATE EXACT LOCATION OF ALL MAJOR COMPONENTS, WITH THE ENGINEER, BEFORE INSTALLATION.

20. ANY SITE AREA DISTURBED BY CONSTRUCTION SHALL BE RESTORED TO IT'S ORIGINAL CONDITION BY THE CONTRACTOR, TO THE SATISFACTION OF THE ENGINEER, AT NO ADDITIONAL COST TO THE STATE.

21. ALL SHOP DRAWINGS, MATERIAL SAMPLES ETC. MUST BE SUBMITTED AND APPROVED BY THE ENGINEER BEFORE INSTALLATION.

22. CRUSHED SLAG SHALL NOT BE USED AS AN AGGREGATE MATERIAL.

23. ALL MATERIALS THAT ARE TO BE SALVAGED SHALL BE THE PROPERTY OF THE STATE OF ILLINOIS AND DELIVERED BY THE CONTRACTOR TO:

BOWMAN AVENUE PUMP STATION

728 EXCHANGE AVE.

EAST ST. LOUIS, IL

CONTACT PETE SAWYER AT (618) 304-2082 TO SCHEDULE DELIVERY

24. THE DEPARTMENT RESERVES THE RIGHT TO NOTIFY THE CONTRACTOR TO CHANGE THE CONSTRUCTION SCHEDULE IF NEEDED TO ENSURE PROPER DEWATERING NEEDS FOR THE DEPARTMENT.

25. PRIOR TO ANY CONSTRUCTION ACTIVITY, THE CONTRACTOR SHALL VERIFY WITH THE DEPARTMENT THAT ALL RIGHT OF WAY HAS BEE AQUIRED.
- RATES OF APPLICATION TABLE
- | | |
|---|-----------------------------------|
| AGGREGATE (SURFACE, BASE, SUBBASE, OR BACKFILL) | 2.05 TON / CU YD |
| STONE DUMPED RIPRAP | 1.50 TON / CU YD |
| HOT-MIX ASPHALT: | |
| BITUMINOUS MATERIALS (PRIME COAT) | 0.05 POUND / SQ FT (on pavement) |
| SURFACE / BINDER (112 lbs) | 0.25 POUND / SQ FT (on aggregate) |
| | 0.056 TON / SQ YD • IN |
| SEEDING: | |
| NITROGEN FERTILIZER NUTRIENT | |
| PHOSPHORUS FERTILIZER NUTRIENT | 90 LBS / ACRE |
| POTASSIUM FERTILIZER NUTRIENT | 90 LBS / ACRE |
| AGRICULTURAL GROUND LIMESTONE | 90 LBS / ACRE |
| MULCH METHOD | 2.0 TON / ACRE |
| | 2.0 TON / ACRE |
- COMMITMENTS
- IF ARCHAEOLOGICAL CLEARANCE HAS NOT BEEN OBTAINED FOR THE ENTIRE PROJECT, THE RESIDENT ENGINEER SHALL PROVIDE THE CONTRACTOR THOSE AREAS OF THE PROJECT WHICH HAVE BEEN CLEARED, AND IN WHICH THE CONTRACTOR MAY WORK. THE RESIDENT ENGINEER SHALL ALSO NOTIFY THE CONTRACTOR WHEN ADDITIONAL SITES BECOME AVAILABLE.
- SYMBOLS AND ABBREVIATIONS
- EXISTING FORCEMAIN

PROPOSED FORCEMAIN
-
- | | | |
|----------------------------|------------|-----------|
| USER NAME = b9j | DESIGNED - | REVISED - |
| | DRAWN - | REVISED - |
| PLOT SCALE = 0.1667' / IN. | CHECKED - | REVISED - |
| PLOT DATE = 1/12/2015 | DATE - | REVISED - |
- STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
- GENERAL NOTES
MISSOURI AVENUE DEEP WELL FACILITY
- SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.
- | F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|---------|-----------|--------------|-----------|
| 55/70/64 | 82-4T-1 | ST. CLAIR | 185 | 3 |
| CONTRACT NO. 76099 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE					
				URBAN 100% STATE					
				0040					
50800515	BAR SPLICERS	EACH	57	57					
51100300	SLOPE WALL 6 INCH	SQ YD	4125	4125					
51202100	FURNISHING STEEL PILES HP14X117	FOOT	960	960					
51202305	DRIVING PILES	FOOT	960	960					
51204100	TEST PILE STEEL HP14X117	EACH	1	1					
54248510	CONCRETE COLLAR	CU YD	1	1					
54260311	TRAVERSABLE PIPE GRATE	FOOT	19.3	19.3					
54261327	CONCRETE END SECTION, STANDARD 542001, 27", 1:3	EACH	1	1					
54262315	CONCRETE END SECTION, STANDARD 542006, 15", 1:3	EACH	1	1					
54262318	CONCRETE END SECTION, STANDARD 542006, 18", 1:3	EACH	3	3					
542C0223	PIPE CULVERTS, CLASS C, TYPE 1 18"	FOOT	192	192					
550A0340	STORM SEWERS, CLASS A, TYPE 2 12"	FOOT	25	25					
550A0380	STORM SEWERS, CLASS A, TYPE 2 18"	FOOT	36	36					
550A0420	STORM SEWERS, CLASS A, TYPE 2 27"	FOOT	109	109					

14

FILE NAME: L:\NFI\182\1823\Work Order 6\CA00 Sheet\0876099-01-10000.dgn

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE					
				0040					
56104800	WATER VALVES 4"	EACH	1	1					
56200500	WATER SERVICE LINE 1 1/2"	FOOT	170	170					
56201120	WATER SERVICE LINE 4"	FOOT	150	150					
56500500	DOMESTIC METER VAULTS	EACH	1	1					
60100060	CONCRETE HEADWALLS FOR PIPE DRAINS	EACH	2	2					
60100905	PIPE DRAINS 4"	FOOT	93	93					
60100925	PIPE DRAINS 8"	FOOT	191	191					
60221100	MANHOLES, TYPE A, 5'-DIAMETER, TYPE 1 FRAME, CLOSED LID	EACH	1	1					
60236200	INLETS, TYPE A, TYPE B GRATE	EACH	1	1					
60600605	CONCRETE CURB, TYPE B	FOOT	171	171					
60605000	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24	FOOT	223	223					
60801008	FLAP GATE 8"	EACH	1	1					
60801018	FLAP GATE 18"	EACH	3	3					
* 63301990	REMOVE AND REERECT TRAFFIC BARRIER TERMINALS, TYPE 1	EACH	1	1					

14

* SPECIALTY ITEM

KLINGNER
ASSOCIATES, P.C.
Engineers • Architects • Surveyors

USER NAME - bgy	DESIGNED - gsb	REVISED -
PLOT SCALE - 40.0000' / 1" =	DRAWN - gsb	REVISED -
PLOT DATE - 1/13/2015	CHECKED -	REVISED -
	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES
MISSOURI AVENUE DEEP WELL FACILITY

SCALE: NONE SHEET 5 OF 10 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55/70/64	82-4T-1	ST. CLAIR	185	8
CONTRACT NO. 76G99				
ILLINOIS FED. AID PROJECT				

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE					
				0040					
* 66900200	NON-SPECIAL WASTE DISPOSAL	CU YD	9500	9500					
* 66900450	SPECIAL WASTE PLANS AND REPORTS	L SUM	1	1					
* 66900530	SOIL DISPOSAL ANALYSIS	EACH	3	3					
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	30	30					
67100100	MOBILIZATION	L SUM	1	1					
70100205	TRAFFIC CONTROL AND PROTECTION, STANDARD 701401	EACH	1	1					
70100420	TRAFFIC CONTROL AND PROTECTION, STANDARD 701411	EACH	1	1					
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	120	120					
70106800	CHANGEABLE MESSAGE SIGN	CAL MO	16	16					
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	1416	1416					
70400100	TEMPORARY CONCRETE BARRIER	FOOT	554	554					
70600260	IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	1	1					
* 78009004	MODIFIED URETHANE PAVEMENT MARKING - LINE 4"	FOOT	1050	1050					
* 78009005	MODIFIED URETHANE PAVEMENT MARKING - LINE 5"	FOOT	488	488					

14 * SPECIALTY ITEM

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE					
				0040					
* 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	26	26					
* 78200410	GUARDRAIL MARKERS, TYPE A	EACH	17	17					
* 78200520	BARRIER WALL MARKERS, TYPE B	EACH	13	13					
78300100	PAVEMENT MARKING REMOVAL	SQ FT	968	968					
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	26	26					
80300100	LOCATING UNDERGROUND CABLE	FOOT	4275	4275					
81028320	UNDERGROUND CONDUIT, PVC, 1" DIA.	FOOT	554	554					
81028350	UNDERGROUND CONDUIT, PVC, 2" DIA.	FOOT	370	370					
81028370	UNDERGROUND CONDUIT, PVC, 3" DIA.	FOOT	564	564					
81400700	HANDHOLE, PORTLAND CEMENT CONCRETE	EACH	7	7					
81400720	DOUBLE HANDHOLE, PORTLAND CEMENT CONCRETE	EACH	1	1					
87100020	FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM12F	FOOT	614	614					
87800200	CONCRETE FOUNDATION, TYPE D	FOOT	7.0	7.0					
87900200	DRILL EXISTING HANDHOLE	EACH	1	1					

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KLINGNER ASSOCIATES, P.C. Engineers • Architects • Surveyors	USER NAME : seb	DESIGNED - seb	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES MISSOURI AVENUE DEEP WELL FACILITY			F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE • 40.0000' / 1" =	DRAWN - seb	REVISED -					55/70/64	82-4T-1	ST. CLAIR	185	10
	PLOT DATE • 1/14/2015	CHECKED -	REVISED -					CONTRACT NO. 76G99				
	DATE -	REVISED -	ILLINOIS FED. AID PROJECT									
				SCALE: NONE	SHEET 7 OF 10 SHEETS	STA.	TO STA.					

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE					
				URBAN 100% STATE					
				0040					
Z0004002	BOLLARDS	EACH	8	8					
Z0007601	BUILDING REMOVAL NO. 1	L SUM	1	1					
Z0012754	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SO FT	7	7					
Z0013798	CONSTRUCTION LAYOUT	L SUM	1	1					
Z0018500	DRAINAGE STRUCTURES TO BE CLEANED	EACH	23	23					
Z0056700	SANITARY SEWER 4"	FOOT	108	108					
Z0068300	STEEL CASINGS 36"	FOOT	86	86					
X0301028	PUMP STATION SCADA EQUIPMENT	L SUM	1	1					
X0323160	VIDEO INSPECTION OF STORM SEWER	FOOT	2619	2619					
X0323255	DRILLED WELL	EACH	1	1					
X0323859	DOWNSPOUT CONNECTION	EACH	2	2					
X0324751	HIGH DENSITY POLYETHYLENE PIPE 18"	FOOT	92	92					
X0324757	HIGH DENSITY POLYETHYLENE PIPE 24"	FOOT	4724	4724					
X0326713	SANITARY SEWER CONNECTION	EACH	1	1					

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE					
				0040					
X0326931	RECORDER WELL	EACH	1	1					
X0326934	HIGH DENSITY POLYETHYLENE PIPE 12"	FOOT	246	246					
X0327021	LOCATING DEEP WELL FORCE MAIN	EACH	7	7					
X0327799	STEEL CASING PIPE, AUGERED AND JACKED, 36"	FOOT	136	136					
X0327801	HORIZONTAL WELL	FOOT	1540	1540					
X0335700	PUMP STATION GENERAL WORK	L SUM	1	1					
X0783300	PUMP STATION ELECTRICAL WORK	L SUM	1	1					
X0783500	PUMP STATION MECHANICAL WORK	L SUM	1	1					
X2090210	POROUS GRANULAR BACKFILL, SPECIAL	CU YD	3000	3000					
X4240430	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH, SPECIAL	SQ FT	683	683					
X4402720	GUTTER REMOVAL (SPECIAL)	FOOT	61	61					
X5504000	STORM SEWERS, DUCTILE IRON, TYPE 2 8"	FOOT	149	149					
X5504020	STORM SEWERS, DUCTILE IRON, TYPE 2 18"	FOOT	627	627					
X5504026	STORM SEWERS, DUCTILE IRON, TYPE 2 24"	FOOT	223	223					

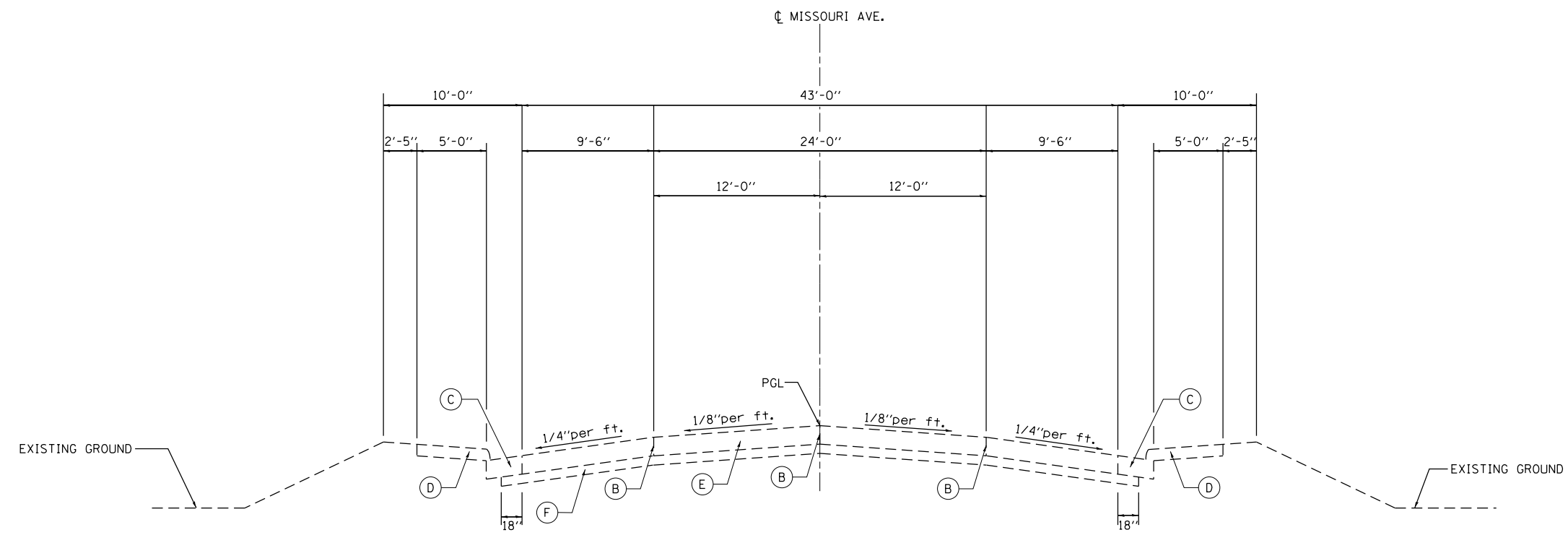
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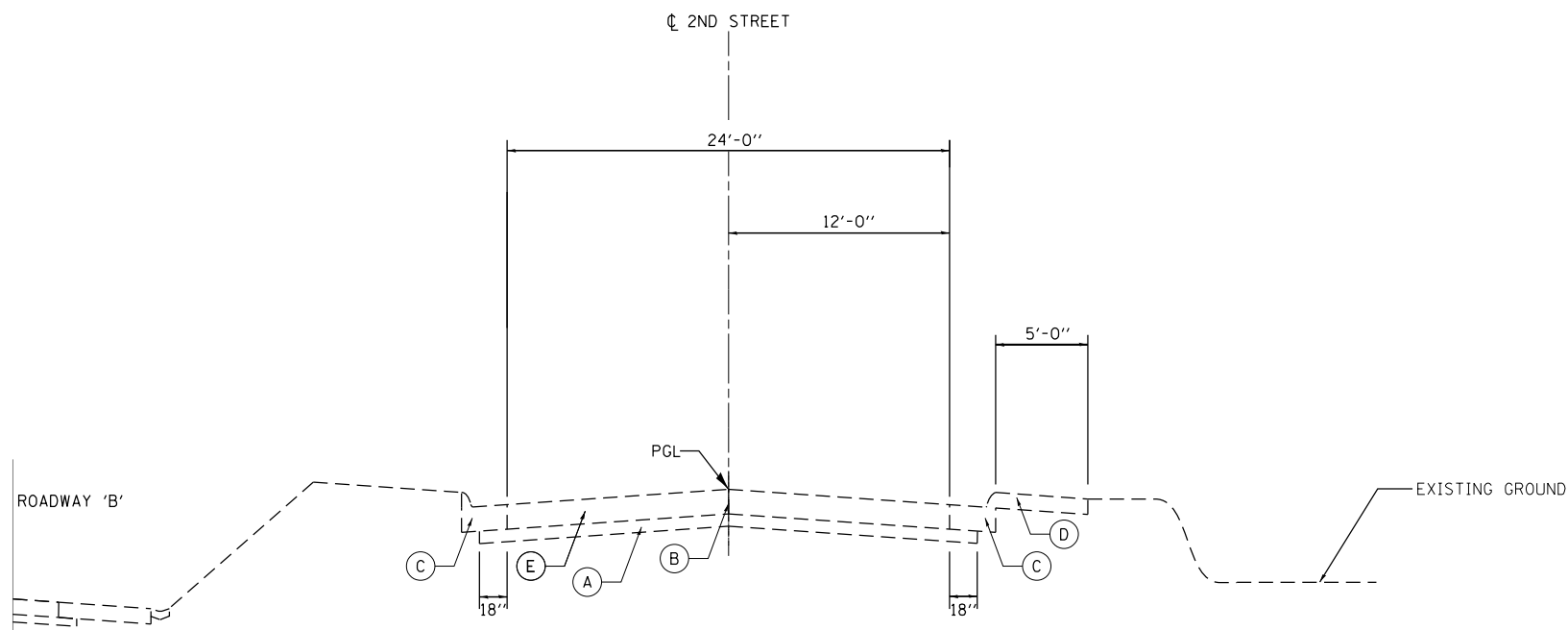
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CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE					
				0040					
X6015015	REMOVE AND REPLACE CONCRETE HEADWALLS FOR PIPE UNDERDRAINS	EACH	1	1					
X6020294	MANHOLES, TYPE A, 7'-DIAMETER, TYPE 1 FRAME, CLOSED LID, RESTRICTOR PLATE	EACH	1	1					
X6020502	CATCH BASINS, TYPE A, 5'-DIAMETER, TYPE 22 FRAME AND GRATE (SPECIAL)	EACH	2	2					
X6022820	MANHOLES, SANITARY, 5'-DIAMETER, TYPE 1 FRAME, CLOSED LID	EACH	1	1					
X6040205	FRAMES AND LIDS, SPECIAL	EACH	19	19					
X6063000	CONCRETE GUTTER, TYPE B (SPECIAL)	FOOT	61	61					
X6640308	CHAIN LINK GATES (SPECIAL)	EACH	2	2					
X6640570	CHAIN LINK FENCE, 8' (SPECIAL)	FOOT	1333	1333					
X7010224	TRAFFIC CONTROL AND PROTECTION, STANDARD BLR 22 (SPECIAL)	L SUM	1	1					
X7010410	SPEED DISPLAY TRAILER	CAL MO	4	4					
X7030030	WET REFLECTIVE TEMPORARY TAPE TYPE III, 4 INCH	FOOT	4247	4247					
70102634	TRAFFIC CONTROL AND PROTECTION, STANDARD 701611	L SUM	1	1					

11 12 (w/crenate)



EXISTING TYPICAL SECTION
MISSOURI AVENUE (LOOKING NORTH)
FOR INFORMATION ONLY

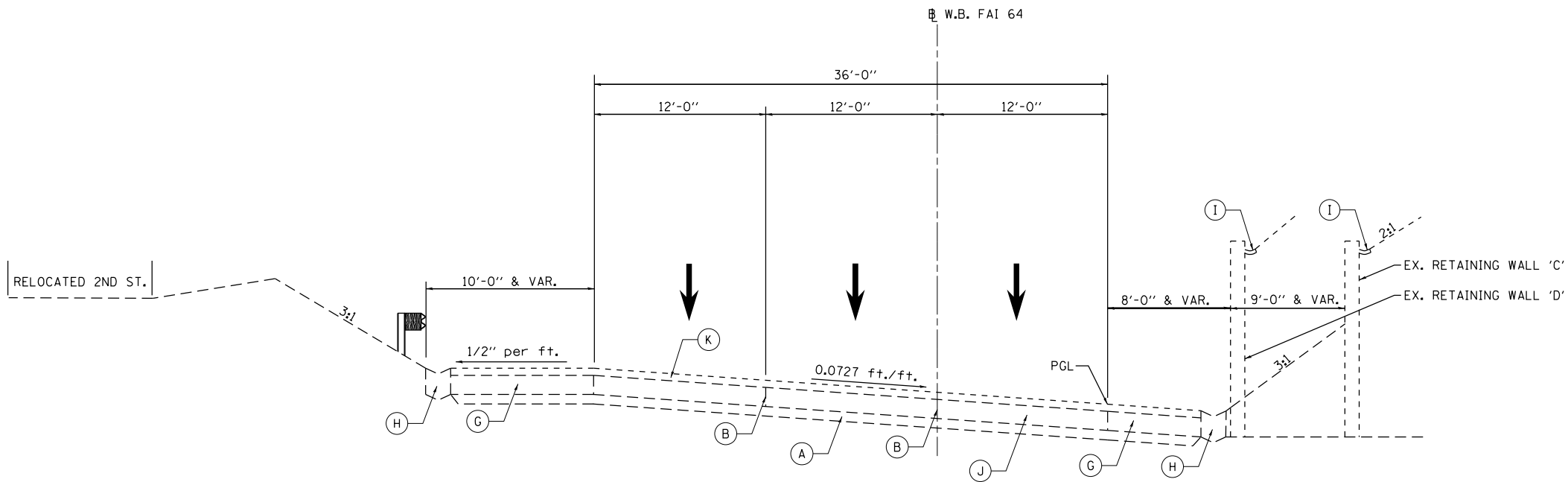


EXISTING TYPICAL SECTION
2ND STREET (LOOKING SOUTH)
FOR INFORMATION ONLY

LEGEND:

- (A) EXISTING SUB-BASE GRANULAR MATERIAL, TYPE A (4" MIN.)
- (B) EXISTING LONGITUDINAL SAWED JOINT OR LONGITUDINAL CONSTRUCTION JOINT
- (C) EXISTING COMBINATION CONCRETE CURB & GUTTER, TYPE B-6.24
- (D) EXISTING PORTLAND CEMENT CONCRETE SIDEWALK (5" THICK)
- (E) EXISTING PORTLAND CEMENT CONCRETE PAVEMENT (8" THICK)
- (F) EXISTING STABILIZED SUB-BASE 4"
- (G) EXISTING STABILIZED SHOULDERS (BITUMINOUS AGGREGATE MIXTURE)
- (H) EXISTING CONCRETE GUTTER, TYPE B
- (I) EXISTING CONCRETE GUTTER, TYPE B (SPECIAL)
- (J) EXISTING CONTINUOUSLY REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT (8" THICK)
- (K) EXISTING HMA SURFACE, DEPTH UNKNOWN

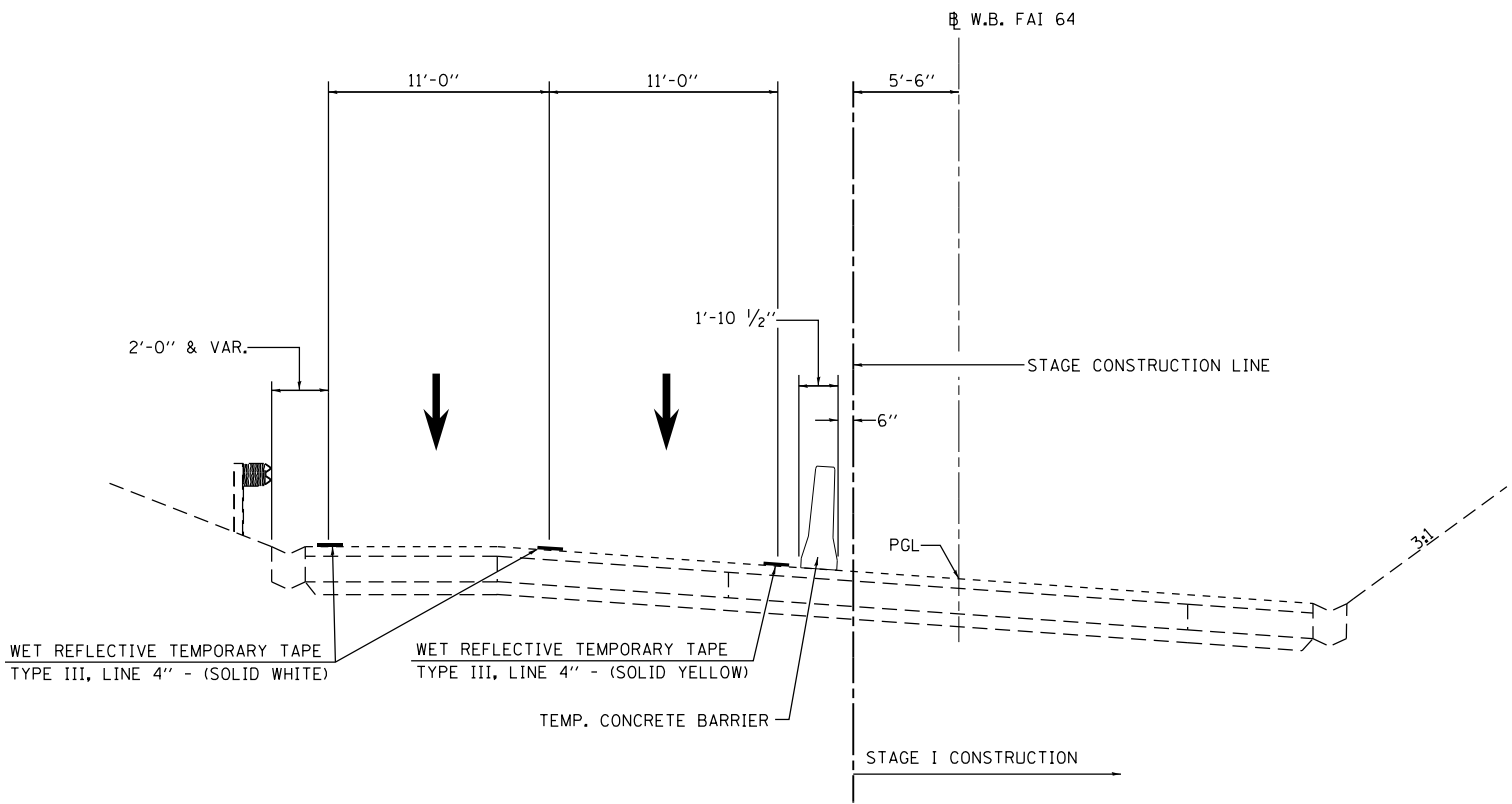
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EXISTING TYPICAL SECTION
FAI 64 WEST BOUND (LOOKING NORTHEAST)

LEGEND:

- (A) EXISTING SUB-BASE GRANULAR MATERIAL, TYPE A (4" MIN.)
- (B) EXISTING LONGITUDINAL SAWED JOINT OR LONGITUDINAL CONSTRUCTION JOINT
- (C) EXISTING COMBINATION CONCRETE CURB & GUTTER, TYPE B-6.24
- (D) EXISTING PORTLAND CEMENT CONCRETE SIDEWALK (5" THICK)
- (E) EXISTING PORTLAND CEMENT CONCRETE PAVEMENT (8" THICK)
- (F) EXISTING STABILIZED SUB-BASE 4"
- (G) EXISTING STABILIZED SHOULDERS (BITUMINOUS AGGREGATE MIXTURE)
- (H) EXISTING CONCRETE GUTTER, TYPE B
- (I) EXISTING CONCRETE GUTTER, TYPE B (SPECIAL)
- (J) EXISTING CONTINUOUSLY REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT (8" THICK)
- (K) EXISTING HMA SURFACE, DEPTH UNKNOWN



STAGE I CONSTRUCTION
FAI 64 WEST BOUND (LOOKING NORTHEAST)
FROM STA. 121+67 TO STA. 124+67

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USER NAME = bgj	DESIGNED - RP	REVISED -
DRAWN - RP	REVIS	REVIS
PLOT SCALE = 8.0000' / in.	CHECKED - SGL	REVISED -
PLOT DATE = 1/13/2015	DATE - 7/1/2014	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS
MISSOURI AVENUE DEEP WELL FACILITY

SCALE: N.T.S. SHEET 2 OF 2 SHEETS STA. N/A TO STA. N/A

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55/70/64	82-4T-1	ST. CLAIR	185	15
CONTRACT NO. 76099				
ILLINOIS FED. AID PROJECT				

EARTHWORK SCHEDULE

	20200100		20400800
	EARTH EXCAVATION	EARTH EXCATION (REDUCED 20%)	EMBANKMENT
DESCRIPTION	(CY)	(CY)	(CY)
FINAL GRADE	2983	2386	6658
BASIN ADJUSTMENT	549	439	-
PARKING LOT ADJUSTMENT	-	-	(399)
WELL HOUSE ADJUSTMENT	-	-	(770)
AGGREGATE DRIVE ADJUSTMENT	-	-	(42)
TOPSOIL ADJUSTMENT	-	-	(504)
TOTAL	3532	2825	4943
USE	3530		2120

EROSION CONTROL SCHEDULE

	25100630	25100900	28000250	28000305	28000400	28000500
	EROSION CONTROL BLANKET	TURF REINFORCEMENT MAT	TEMP EROSION CONTROL SEEDING	TEMPORARY DITCH CHECKS	PERIMETER EROSION BARRIER	INLET AND PIPE PROTECTION
LOCATION	(SQ YD)	(SQ YD)	(POUND)	(FOOT)	(FOOT)	(EACH)
SOUTH OF BASIN	1041	180	-	-	400	-
NORTH & WEST OF BASIN	609	40	-	40	550	-
NORTH & EAST OF PARKING LOT	488	-	-	-	380	-
10+55.0 35' RT (2ND STREET)	-	-	-	-	-	-
39+95 (FORCE MAIN)	-	-	-	-	-	1
45+34 (FORCE MAIN)	-	-	-	-	-	1
ESTIMATED QUANTITY	162	50	2050	50	220	1
TOTAL	2300	270	2050	90	1550	3

SEEDING SCHEDULE

	21101615	25000200	25000400	25000500	25000600	25100115	21101615
	SEEDING, CLASS 1B	SEEDING, CLASS 2	NITROGEN FERTILIZER NUTRIENT	PHOSPHORUS FERTILIZER NUTRIENT	POTASSIUM FERTILIZER NUTRIENT	MULCH, METHOD 2	TOPSOIL FURNISH AND PLACE, 4"
	(ACRE)	(ACRE)	(POUND)	(POUND)	(POUND)	(ACRE)	(SQ YD)
SOUTH OF BASIN	0.37		33	33	33	0.37	1814
WEST OF BASIN	0.13		12	12	12	0.13	634
NORTH & WEST OF BASIN	0.17		15	15	15	0.17	813
NORTH & WEST OF PARKING LOT	0.13		12	12	12	0.13	648
BETWEEN WELL HOUSE& BASIN	0.13		12	12	12	0.13	623
FORCE MAIN (13+10 TO 15+30)		0.08	7	7	7	0.08	
FORCE MAIN (16+80 TO 59+25)		1.46	131	131	131	1.46	
FORCE MAIN (60+60 TO 61+17)		0.02	2	2	2	0.02	
TOTAL	0.9	1.6	224	224	224	2.5	4532

TREE REMOVAL SCHEDULE

	20100110	20100500
	TREE REMOVAL (6 TO 15 UNITS)	TREE REMOVAL, ACRES
LOCATION	(UNIT)	(ACRE)
10+50 TO 14+36 RT - 2ND STREET		1.4
10+54 27' RT - 2ND STREET	9	
59+26 1' RT - 24" FORCE MAIN	36	
TOTAL:	45	1.4

GUARDRAIL REMOVAL SCHEDULE

	63301990
	REMOVE AND REERECT TRAFFIC BARRIER TERM, TY 1
LOCATION	(EACH)
4+80 LT (MISSOURI AVE)	1
TOTAL:	1

PAVEMENT SCHEDULE

	21001000	35101800	40200700	42300400	42000301
	GEOTECH FABRIC FOR GROUND STABILIZATION	AGGREGATE BASE COURSE, TYPE B 6"	AGGREGATE SURFACE COURSE, TYPE A 8"	PCC DRIVEWAY PAVEMENT, 8 INCH	PORTLAND CEMENT CONCRETE PAVEMENT 8" (JOINTED)
LOCATION	(SQ YD)	(SQ YD)	(SQ YD)	(SQ YD)	(SQ YD)
WELL HOUSE PARKING LOT	914	914	-	-	914
BASIN ACCESS DRIVE	-	-	190	-	-
11+05.5 RT (2ND STREET)	-	123	-	123	-
TOTAL	914	1037	190	123	914

RIPRAP SCHEDULE

	28100725	28200200
	STONE DUMPED RIPRAP, CLASS B3	FILTER FABRIC
LOCATION	(SQ YD)	(SQ YD)
10+43 TO 10+68 RT (2ND STREET)	83	83
TOTAL	83	83

SLOPE WALL SCHEDULE

	51100300
	SLOPE WALL 6 INCH
LOCATION	(SQ YD)
DETENTION BASIN	4125
TOTAL:	4125

SIDEWALK SCHEDULE

	42400200	42400800	X4240430
	PCC SIDEWALK 5 INCH	DETECTABLE WARNINGS	PCC SIDEWALK 5 INCH, SPECIAL
LOCATION	(SQ FT)	(SQ FT)	(SQ FT)
4+97 TO 5+21 RT (MISSOURI AVE)	122	10	-
5+52 TO 5+82 RT (MISSOURI AVE)	167	10	-
WELLL HOUSE - WEST SIDE	-	-	458
WELLL HOUSE - SOUTH SIDE	-	-	225
TOTAL	289	20	683

REMOVAL & PATCHING SCHEDULE

	44000500	44201377	44200150	44201377	44201383	44213200
	COMBINATION CURB AND GUTTER REMOVAL	SIDEWALK REMOVAL	PAVEMENT PATCHING, TYPE IV, 12 INCH	CLASS C PATCHES, TYPE II, 12 INCH	CLASS C PATCHES, TYPE IV, 12 INCH	SAW CUTS
LOCATION	(FOOT)	(SQ FT)	(SQ YD)	(SQ YD)	(SQ YD)	(FOOT)
10+27.5 TO 10+33.5 LT (2ND STREET)	6					
10+31.4 TO 12+68.0 RT (2ND STREET)		1304				
10+32.5 TO 10+38.5 RT (2ND STREET)	6					
10+70.0 TO 11+40.0 RT (2ND STREET)	70					
10+86.0 TO 10+92.0 RT (2ND STREET)				8.1		24.4
10+86.0 TO 10+92.0 LT (2ND STREET)	7			10.9		33.3
11+70.0 TO 12+30.0 RT (2ND STREET)	60				73.1	27.4
11+70.0 TO 12+30.0 LT (2ND STREET)	60				84.1	31.2
12+62.0 TO 12+68.0 RT (2ND STREET)	6			8.3		29.8
12+62.0 TO 12+68.0 LT (2ND STREET)	6			7.9		28.4
4+76.1 TO 4+88.4 RT (MISSOURI AVE)			25.0			47.8
4+76.1 TO 4+88.4 LT (MISSOURI AVE)			40.2			49.6
5+55.6 TO 5+81.9 RT (MISSOURI AVE)		114				
TOTAL	221	1418	65	35	157	272

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FENCING SCHEDULE

LOCATION				X6640570	X6640308	NOTES
STATION	OFFSET	NORTHING	EASTING	CHAIN LINK FENCE, 8' (SPECIAL)	CHAIN LINK GATES (SPECIAL)	
				(FOOT)	(EACH)	
10+22.07	41.39' LT	14,039,962.51	2,450,943.37			
TO				21.2		
10+34.13	23.98' LT	14,039,970.48	2,450,923.75			
TO				12.1		
10+35.50	12.00' LT	14,039,979.77	2,450,916.05			
TO				-	1	24' DOUBLE GATE CENTERED ON 2ND ST.
10+40.50	12.17' RT	14,039,997.26	2,450,898.64			
TO				46.3		
10+40.50	58.46' RT	14,040,036.01	2,450,873.32			
TO				21.2		
10+61.30	54.20' RT	14,040,021.07	2,450,858.24			
TO				34.3	1	24' DOUBLE GATE CENTERED ON ENTRANCE
11+18.43	42.51' RT	14,039,980.03	2,450,816.81			
TO				15		
11+22.58	28.09' RT	14,039,965.70	2,450,821.22			
TO				295.3		
14+20.00	50.00' RT	14,039,746.76	2,450,623.05			
TO				60.4		
14+30.00	110.00' RT	14,039,786.96	2,450,577.91			
TO				131.9		
12+90.00	215.00' RT	14,039,913.95	2,450,542.38			
TO				195.6		
12+15.00	370.00' RT	14,040,095.48	2,450,469.41			
TO				113.8		
11+70.00	365.00' RT	14,040,177.87	2,450,547.97			
TO				130.9		
11+63.28	234.92' RT	14,040,092.53	2,450,647.28			
TO				116.6		
10+89.08	190.00' RT	14,040,119.56	2,450,760.70			
TO				138.6		
10+61.30	54.20' RT	14,040,021.07	2,450,858.24			
TOTAL:				1333	2	

CULVERT REMOVAL SCHEDULE

LOCATION		50105220
TYPE	PIPE CULVERT REMOVAL	(FOOT)
39+47.2 (FORCE MAIN)	18" CMP	93.5
44+84.5 (FORCE MAIN)	18" CMP	97.6
TOTAL:		191

BUILDING REMOVAL SCHEDULE

LOCATION		Z0007601
BUILDING REMOVAL NO. 1	(L SUM)	
13+84 70' RT (2ND STREET) - FOUNDATION	1	
TOTAL		1

CULVERT SCHEDULE

LOCATION		542C0223
PIPE CULVERTS, CLASS C, TYPE 1 18"	(FOOT)	
39+47.2 (FORCE MAIN)	94	
44+84.5 (FORCE MAIN)	98	
TOTAL:		192

UNDERDRAIN REMOVAL SCHEDULE

STATION		X6015015
REMOVE AND REPLACE CONC HDWL FOR PIPE UNDERDRAINS	(EACH)	
26+83 (FORCE MAIN)	1	
TOTAL		1

LOCATING UNDERGROUND CABLE SCHEDULE

LOCATION			80300100
STATION	TO	STATION	LOCATING UNDERGROUND CABLE
			(FOOT)
16+90	TO	21+00	410
21+00	TO	27+00	600
27+00	TO	33+00	600
33+00	TO	39+00	600
39+00	TO	45+00	600
45+00	TO	51+00	600
51+00	TO	57+00	600
57+00	TO	59+23	223
60+75	TO	61+17	42
TOTAL			4275

ELECTRICAL SCHEDULE

	81400700	81400720	87900200	87800200	X0783300
LOCATION / DESCRIPTION	HH, PCC (EACH)	DOUBLE HH, PCC (EACH)	DRILL EXISTING HANDHOLE (EACH)	CONC FOUND, TYPE D (FOOT)	PUMP STAT ELECT WORK (L SUM)
10+39 36' LT (2ND STREET)		1			
10+68 73' RT (2ND STREET)	1				
11+29 56' RT (2ND STREET)	1				
11+65 44' RT (2ND STREET)	1				
11+65 49' RT (2ND STREET)	1				
11+67 115' RT (2ND STREET)				4.0	
11+69 160' RT (2ND STREET)				3.0	
13+25 35' LT (2ND STREET)	1				
118+40 177' RT (ROADWAY B)			1		
119+20 130' RT (ROADWAY B)	1				
4+78 36' LT (MISSOURI AVE)	1				
WELL HOUSE & EXISTING PUMP STATION					1
TOTAL	7	1	1	7.0	1

CONDUIT / WIRE SCHEDULE

	81028320	81028350	81028370	87100020
LOCATION	UNDERGROUND CONDUIT, PVC, 1" DIA. (FOOT)	UNDERGROUND CONDUIT, PVC, 2" DIA. (FOOT)	UNDERGROUND CONDUIT, PVC, 3" DIA. (FOOT)	FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM12F (FOOT)
WELL HOUSE TO 10+68 73' RT (2ND STREET)	368	184		
10+68 73' RT (2ND STREET) TO 4+78 36' LT (MISSOURI AVE)	186	186		
WELL HOUSE TO 11+29 56' RT (2ND STREET)			70	75
11+29 56' RT (2ND STREET) TO 11+65 49' RT (2ND STREET)			44	49
11+65 49' RT (2ND STREET) TO 13+25 35' LT (2ND STREET)			191	196
13+25 35' LT (2ND ST) TO 119+20 130' RT (ROADWAY B)			172	177
119+20 130' RT (ROADWAY B) TO 118+40 (ROADWAY B)			87	92
119+20 130' RT (ROADWAY B) TO CONTROLLER				25
TOTAL	554	370	564	614

NOTE: PAYMENT FOR ALL OTHER CONDUIT AND WIRE FOR THE WELL HOUSE AND EXISTING PUMP STATION, INCLUDING THE NEW SERVICE SHALL BE INCLUDED IN THE PAY ITEM "PUMP STATION ELECTRICAL WORK.

BOLLARD SCHEDULE

LOCATION		Z0004002
BOLLARDS (EACH)		
NORTHEAST CORNER OF WELL HOUSE	1	
WEST OVERHEAD DOOR OF WELL HOUSE	2	
EAST OVERHEAD DOOR OF WELL HOUSE	2	
NORTHWEST CORNER OF WELL HOUSE	1	
WELL HOUSE TRANSFORMER	2	
TOTAL	8	



USER NAME = bgj	DESIGNED - SEB	REVISED -
	DRAWN - SEB	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 1/13/2015	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES
MISSOURI AVENUE DEEP WELL FACILITY

SCALE: NONE SHEET 2 OF 6 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55/70/64	82-4T-1	ST. CLAIR	185	17
CONTRACT NO. 76C99				
ILLINOIS FED. AID PROJECT				

FILE NAME = G:\11Files\110023\Work_Order_6\CADD_Sheets\0376G99-sht-schedule.dgn

DRAINAGE STRUCTURE SCHEDULE

				54260311	54261327	54262315	54262318	60801008	60801018	60236200	60221100	X6020294	X6020502
LABEL	ROADWAY	STATION	OFFSET	TRAVERSABLE PIPE GRATE	CONC END SECTION, STD 542001, 27", 1:3	CONC END SECTION, STD 542006, 15", 1:3	CONC END SECTION, STD 542006, 18", 1:3	FLAP GATE 8"	FLAP GATE 18"	INLETS, TY A, TY 8 GR	MH, TY A, 5', TY 1 FR, CLSD LID	MH, TY A, 7', TY 1 FR, CLSD LID, REST. PLATE	CB, TY A, 5', TY 22 FR AND GR (SPL)
				(FOOT)	(EACH)	(EACH)	(EACH)	(EACH)	(EACH)	(EACH)	(EACH)	(EACH)	(EACH)
A1	2ND ST	12+57.9	84.8' RT	19.3	1								
A3	2ND ST	12+65.0	62.0' RT									1	
A5	2ND ST	12+65.0	32.2' LT								1		
B2	2ND ST	12+11.8	53.1' RT				3		3				
B4	2ND ST	12+11.8	53.0' RT			1		1					
F2	2ND ST	10+55.0	35.0' RT							1			
-	I-64/55	123+85.0	17.8' RT										1
-	I-64/55	124+25.0	17.8' RT										1
TOTAL:				19.3	1	1	3	1	3	1	1	1	2

STORM SEWER /FORCE MAIN SCHEDULE

				20800150	550A0340	550A0420	X5504000	X5504020	X5504026	X0326934	X0324751	X0324757	X0327799	Z0068300
LABEL	STATION TO STATION			TRENCH BACKFILL	SS, CL A, TY 2 12"	SS, CL A, TY 2 27"	SS, DI, TY 2 8"	SS, DI, TY 2 18"	SS, DI, TY 2 24"	HDPE 12"	HDPE 18"	HDPE 24"	STEEL CASING, A&J, 36"	STEEL CASINGS 36"
				(CU YD)	(FOOT)	(FOOT)	(FOOT)	(FOOT)	(FOOT)	(FOOT)	(FOOT)	(FOOT)	(FOOT)	(FOOT)
A2	0+76.1	TO	1+00.0	8.6		20.4								
A4	1+00.0	TO	1+94.2	7.1		88.2								
B1	5+00.0	TO	6+65.5	116.6				498.7						
B3	5+00.0	TO	6+67.3	37.3			149.1							
C4	-									48.0				
C5	-									61.0				
C7	-									137.0				
F1	10+32.2	TO	10+55.0	2.4	25.0									
-	10+03.5	TO	15+00.0	119.0				128.3			92.2	330.0		62.0
-	15+00.0	TO	21+00.0									600.0	136.0	
-	21+00.0	TO	27+00.0									600.0		
-	27+00.0	TO	33+00.0									600.0		
-	33+00.0	TO	39+00.0									600.0		
	39+00.0	TO	45+00.0									600.0		
	45+00.0	TO	51+00.0									600.0		24.0
	51+00.0	TO	57+00.0									600.0		
-	57+00.0	TO	61+17.4						223.1			194.3		
TOTAL:				291.0	25	109	149	627	223	246	92	4724	136	86

SANITARY SEWER SCHEDULE

			20800150	Z0056700	X0326713	X6022820
LABEL	STATION	OFFSET	TRENCH BACKFILL	SANITARY SEWER 4"	SANITARY SEWER CONNECTION	MH, SANITARY, 5', TY 1 FR, CLOSED LID
			(CU YD)	(FOOT)	(EACH)	(EACH)
D1	11+85.0	6.4' LT			1	
D2			30.2	108		
D3	11+83.0	102.0' LT				1
TOTAL			30.2	108	1	1

PIPE DRAIN SCHEDULE

		60100060	60100905	60100925	X0323859
LABEL	LOCATION	CONCRETE HEADWALLS FOR PIPE DRAINS	PIPE DRAINS 4"	PIPE DRAINS 8"	DOWNSPOUT CONNECTION
		(EACH)	(FOOT)	(FOOT)	(EACH)
G1	WEST WALL (N) WELL HOUSE				1
G2	NORTH SIDE WELL HOUSE			96	
G1	WEST WALL (S) WELL HOUSE				1
G3	11+89.8 78.9' RT (2ND STREET)	1			
G4	WELL HOUSE OVERFLOWS & SUMPS		93	95	
G5	11+90.2 68.9' RT (2ND STREET)	1			
TOTAL:		2	93	191	2

CURB AND GUTTER SCHEDULE

LOCATION	60600605	60605000
	CONCRETE CURB, TYPE B (FOOT)	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24 (FOOT)
10+27.5 TO 10+33.5 LT (2ND STREET)		6.5
10+32.5 TO 10+38.5 RT (2ND STREET)		7.5
10+70.0 TO 11+40.0 RT (2ND STREET)		70.0
10+86.0 TO 10+92.0 LT (2ND STREET)		7.1
11+70.0 TO 12+30.0 RT (2ND STREET)		60.0
11+70.0 TO 12+30.0 LT (2ND STREET)		60.0
12+62.0 TO 12+68.0 RT (2ND STREET)		6.0
12+62.0 TO 12+68.0 LT (2ND STREET)		6.0
WELL HOUSE PARKING LOT - NORTH & EAST	146.1	
WELL HOUSE PARKING LOT - SOUTH	25.2	
123+67 TO 124+81 RT (ROADWAY B)		
TOTAL	171	223



USER NAME = bgj	DESIGNED - SEB	REVISED -
	DRAWN - SEB	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 1/13/2015	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES		
MISSOURI AVENUE DEEP WELL FACILITY		
SCALE: NONE	SHEET 3 OF 6 SHEETS	STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55/70/64	82-4T-1	ST. CLAIR	185	18
		CONTRACT NO. 76G99		
ILLINOIS		FED. AID PROJECT		

FILE NAME = G:\11\Files\110023\Work_Order_6\CADD_Sheets\0376C99-sht-schedule.dgn

HORIZONTAL WELL SCHEDULE

	X0327801
LOCATION	HORIZONTAL WELL (FOOT)
LATERAL 1	250
LATERAL 2	250
LATERAL 3	180
LATERAL 4	170
LATERAL 5	190
LATERAL 6	250
LATERAL 7	250
TOTAL	1540

RECORDER WELL SCHEDULE

		X0326931
STATION	OFFSET	RECORDER WELL (EACH)
121+93.0	26.4' RT	1
TOTAL		1

PROTECTIVE COAT SCHEDULE

	50300300
PAY ITEM	PROTECTIVE COAT (SQ YD)
PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 8 INCH	123.0
PORTLAND CEMENT CONCRETE PAVEMENT 8" (JOINTED)	914.0
PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	32.1
SLOPE WALL 6 INCH	4125.0
CONCRETE CURB, TYPE B	19.0
COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24	76.4
PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH, SPECIAL	75.9
CONCRETE GUTTER, TYPE B (SPECIAL)	27.0
TOTAL:	5392

FORCE MAIN LOCATING SCHEDULE

		X0327021
LABEL	STATION	LOCATING DEEP WELL FORCE MAIN (EACH)
C4	-	1
C5	-	1
C6	-	2
C7	-	1
-	14+56	1
-	16+90	1
TOTAL		7

FORCE MAIN VAULT SCHEDULE

			50300225	50800105	50200100	X6040205
CALL-OUT	STATION	OFFSET	CONCRETE STRUCTURES (CU YD)	REINFORCEMENT BARS (POUND)	STRUCTURE EXCAVATION (CU YD)	FRAMES AND LIDS, SPECIAL (EACH)
C1	11+36.7	-	29.6	6790	95	1
C2	11+60.9	-	37.5	8200	123	1
C3	13+65.3	-	75.9	32220	328	2
C4	13+76.0	41.8' RT	37.1	8190	115	1
C5	13+84.0	47.2' RT	37.1	8190	115	1
C6	14+12.2	30.2' RT	26.8	5520	102	1
C7	14+64.4	11.8' RT	33.1	7520	102	1
C8	17+91.1	-	22.7	5020	80	1
C9	21+22.9	-	18.7	4390	57	1
C10	25+20.0	-	20.7	4770	68	1
C11	29+29.2	-	28.5	5890	112	1
C12	33+37.8	-	28.7	5900	113	1
C13	37+17.0	-	18.4	4370	55	1
C14	41+91.5	-	18.7	4390	57	1
C15	45+68.7	-	18.7	4390	57	1
C16	49+34.2	-	18.4	4370	55	1
C17	52+88.0	-	19.6	4570	62	1
C18	57+44.4	-	20.4	4620	67	1
TOTAL:			511	129310	1763	19

WATER MAIN SCHEDULE

		20800150	56104800	56200500	56201120	56500500	50200100
LABEL	LOCATION	TRENCH BACKFILL (CU YD)	WATER VALVES 4" (EACH)	WATER SERVICE LINE 1 1/2" (FOOT)	WATER SERVICE LINE 4" (FOOT)	DOMESTIC METER VAULTS (EACH)	STRUCTURE EXCAVATION (CU YD)
E2	10+75.1 32.9' RT (2ND STREET)					1	64
E3	WATER MAIN TO WELL HOUSE				150		
E4	WELL HOUSE TO EX. PUMP STA.	21.2		170			
E5	10+75.1 45.0' RT (2ND STREET)	25.5	1				
TOTAL:		46.7	1	170	150	1	64

STRUCTURAL STEEL SCHEDULE

	50500405
LOCATION	FURNISHING AND ERECTING STRUCTURAL STEEL (POUND)
PIPE BRIDGE OVER ST. CLAIR AVE.	5910
TOTAL:	5910

ALL STRUCTURAL STEEL FOR THE NEW WELL HOUSE BUILDING AND THE EXISTING PUMP STATION BUILDING SHALL BE INCLUDED IN THE UNIT PRICE FOR "PUMP STATION GENERAL WORK"



USER NAME = bgj

PLOT SCALE = 40.0000 ' / in.

PLOT DATE = 1/13/2015

DESIGNED - SEB
DRAWN - SEB
CHECKED -
DATE -

REVISED -
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REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES
MISSOURI AVENUE DEEP WELL FACILITY

SCALE: NONE SHEET 4 OF 6 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55/70/64	82-4T-1	ST. CLAIR	185	19
CONTRACT NO. 76C99				
ILLINOIS FED. AID PROJECT				

FILE NAME = G:\11\Files\110023\Work Order 6\CADD Sheets\0376C99-sht-t-schedule.dgn

TRAFFIC CONTROL SCHEDULE

			70100205	70100420		70103815	70106800	70400100	70600260	78200410	78200520	X7010224	X7010410
LOCATION			TRAFFIC CONTROL AND PROTECTION, STANDARD 701401	TRAFFIC CONTROL AND PROTECTION, STANDARD 701411	TRAFFIC CONTROL AND PROTECTION, STANDARD 701611	TRAFFIC CONTROL SURVEILLANCE	CHANGEABLE MESSAGE SIGN	TEMPORARY CONCRETE BARRIER	IMPACT ATTENUATORS, TEMP (FULLY REDIRECTIVE, NARROW), TEST LVL 3	GUARDRAIL MARKERS, TYPE A	BARRIER WALL MARKERS, TYPE B	TRAFFIC CONTROL AND PROTECTION, STANDARD BLR 22 (SPECIAL)	SPEED DISPLAY TRAILER
STATION	STATION	OFFSET	(EACH)	(EACH)	(L SUM)	(CAL DA)	(CAL MO)	(FOOT)	(EACH)	(EACH)	(EACH)	(EACH)	(CAL MO)
118+00	142+00	N/A	1			120							
121+67	124+67	6.9' LT						300			13		
121+87	136+00	LT								17			
124+67	127+20	6.9' RT						254					
127+20	N/A	12' RT							1				
130+25	N/A	RT											4
131+87	132+47	RT		1									
MISSOURI AVENUE												1	
AS DIRECTED BY THE ENGINEER							16						
ST. CLAIR AVENUE					1								
TOTAL:			1	1	1	120	16	554	1	17	13	1	4

PAVEMENT MARKING SCHEDULE									
LOCATION			WORK ZONE PAVEMENT MARKING REMOVAL	MODIFIED URETHANE PAVEMENT MARKING - LINE 4"	MODIFIED URETHANE PAVEMENT MARKING - LINE 6"	RAISED REFLECTIVE PAVEMENT MARKER	PAVEMENT MARKING REMOVAL	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	WET REFLECTIVE TEMPORARY TAPE TYPE III, 4 INCH
WESTBOUND FAI 55/64/70			70301000	78009004	78009006	78100100	78300100	78300200	X7030030
STATION	STATION	O/S	SQ.FT	FOOT	FOOT	EACH	SQ.FT	EACH	FOOT
119+55	129+30	24' LT	325				321.8		975
119+55	131+87	CL	410.67						1232
119+55	128+00	24' LT		845	243.8				
119+55	129+30	12' LT	325		243.8	26	487.5	26	975
119+55	128+00	CL							
121+67	124+67	LT							
121+87	126+00	LT							
123+67	124+42	13.3' RT		74.5					
123+85	N/A	N/A							
124+25	N/A	N/A							
128+00	129+30	24' LT		130.3					
129+30	142+00	CL					158.8		
131+50	131+87	RT							44.5
131+87	N/A	N/A	14.84						
131+88	142+00	RT							1020.7
131+89	142+00	RT	340.25						
TOTAL			1416	1050	488	26	968	26	4247

CONCRETE GUTTER SCHEDULE					
LOCATION			CONCRETE GUTTER, TYPE B (SPECIAL)	PROTECTIVE COAT	GUTTER REMOVAL (SPECIAL)
WESTBOUND FAI 55/64/70			X6063000	50300300	X4402720
STATION	STATION	O/S	FOOT	SQ.YD	FOOT
123+68	123+99.75	21' RT	31.4	13.6	31
124+12.42	124+42	21' RT	29.3	12.7	29
TOTAL			61.0	27	61



LIN ENGINEERING, LTD.
Consulting Engineers
Springfield, Illinois

USER NAME = seb	DESIGNED - RP	REVISED -
	DRAWN - RP	REVISED -
PLOT SCALE = 40.0000' / in.	CHECKED - SGL	REVISED -
PLOT DATE = 1/14/2015	DATE - 7/30/2014	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES
MISSOURI AVENUE DEEP WELL FACILITY

SCALE: NONE SHEET 5 OF 6 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55/70/64	82-4T-1	ST. CLAIR	185	20
CONTRACT NO. 76C99				
ILLINOIS FED. AID PROJECT				

FILE NAME = G:\11Files\110023\Work Order 6\CADD Sheets\0876C99-sht-schedule.dgn

DRAINAGE SCHEDULE										
LOCATION				TRENCH BACKFILL	PAVEMENT PATCHING, TYPE II, 10 INCH	STORM SEWERS, CLASS A, TYPE 2 18"	CATCH BASINS, TYPE A, 5'- DIAMETER, TYPE 22 FRAME AND GRATE (SPECIAL)	DRAINAGE STRUCTURES TO BE CLEANED	VIDEO INSPECTION OF STORM SEWER	CONCRETE COLLAR
WESTBOUND FAI 55/64/70				20800150	44200120	550A0380	XXXXXXX	Z0018500	X0323160	54248510
STATION	O/S	STATION	O/S	CU YD	SQ YD	FOOT	EACH	EACH	FOOT	CU YD
117+93.28	21.15' RT	117+98.90	18.08' RT						50.0	
120+98.47	21.27' RT	121+04.88	18.30' RT						6.4	
121+04.88	18.30' RT	121+04.66	1.86' LT						19.7	
121+15.01	33.38' LT	121+48.38	22.35' LT						10.9	
121+71.36	29.53' RT	121+70.86	2.73' LT						32.3	
122+53.12	38.54' LT	122+53.12	21.69' LT						17.0	
122+67.23	18.21' RT	122+67.36	2.11' LT						20.0	
123+85	14.8' RT	123+85	5.5' LT	12.0	10.4	18.0	1.0			0.4
124+00.64	19.27' RT	124+06.12	15.73' RT						5.8	
124+06.12	15.73' RT	124+06.00	1.59' LT						17.0	
124+11.55	19.31' RT	124+06.12	15.73' RT						6.3	
124+25	14.9' RT	124+25	5.5' LT	9.5	10.4	18.0	1.0			0.4
124+48.82	16.03' RT	124+48.73	1.53' LT						17.1	
124+97.30	18.35' RT	124+48.82	16.03' RT						47.2	
127+04.71	19.26' RT	124+48.82	16.03' RT						253.0	
124+85.03	32.02' LT	124+84.98	21' LT						10.8	
127+04.17	22.95' RT	127+04.71	19.26' RT						3.7	
127+02.26	32.39' LT	127+04.71	19.26' RT						51.5	
129+86.55	49.04' LT	130+00.75	34.13' LT						20.6	
130+00.12	18.60' RT	127+04.71	19.26' RT						293.3	
130+00.75	34.13' LT	130+00.12	18.60' RT						52.7	
130+06.29	21.02' RT	130+00.12	18.60' RT						6.2	
117+93.28	21.15' RT	N/A	N/A					1		
117+98.90	18.08' RT	N/A	N/A					1		
120+98.47	21.27' RT	N/A	N/A					1		
121+04.88	18.30' RT	N/A	N/A					1		
121+15.01	33.38' LT	N/A	N/A					1		
122+53.12	38.54' LT	N/A	N/A					1		
121+71.36	29.53' RT	N/A	N/A					1		
122+67.23	18.21' RT	N/A	N/A					1		
124+00.64	19.27' RT	N/A	N/A					1		
124+06.12	15.73' RT	N/A	N/A					1		
124+11.55	19.31' RT	N/A	N/A					1		
124+48.82	16.03' RT	N/A	N/A					1		
124+85.03	32.02' LT	N/A	N/A					1		
124+97.30	18.35' RT	N/A	N/A					1		
127+02.26	32.39' LT	N/A	N/A					1		
127+04.17	22.95' RT	N/A	N/A					1		
127+04.71	19.26' RT	N/A	N/A					1		
129+86.55	49.04' LT	N/A	N/A					1		
130+00.12	18.60' RT	N/A	N/A					1		
130+00.75	34.13' LT	N/A	N/A					1		
130+06.29	21.02' RT	N/A	N/A					1		
122+55	38.50' LT	N/A	N/A					1		
TOTAL				21.5	20.8	36.0	2.0	22	941.5	0.8
ROUNDED TOTAL				22	21	36	2	22	942 *	1

- ADDITIONAL 1677 FEET OF VIDEO INSPECTION OF STORM SEWER FROM EXISTING DRAINAGE STRUCTURE AT STA 61+20 TO BOWMAN AVE PUMP STATION. TOTAL = 2619'



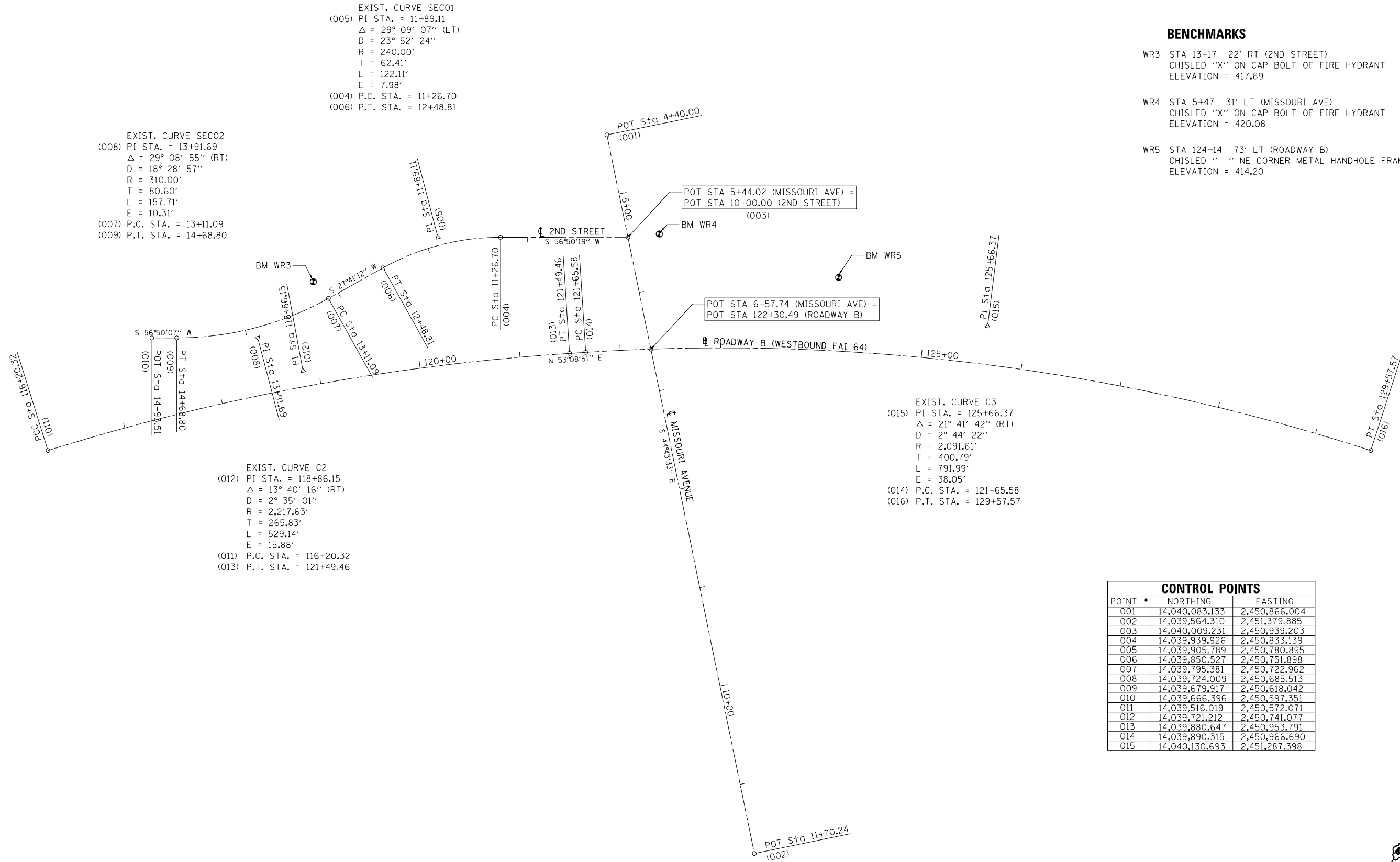
USER NAME : seb	DESIGNED - RP	REVISED -
	DRAWN - RP	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED - SGL	REVISED -
PLOT DATE = 1/14/2015	DATE - 7/31/2014	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES			
MISSOURI AVENUE DEEP WELL FACILITY			
SCALE: NONE	SHEET 6 OF 6 SHEETS	STA.	TO STA.

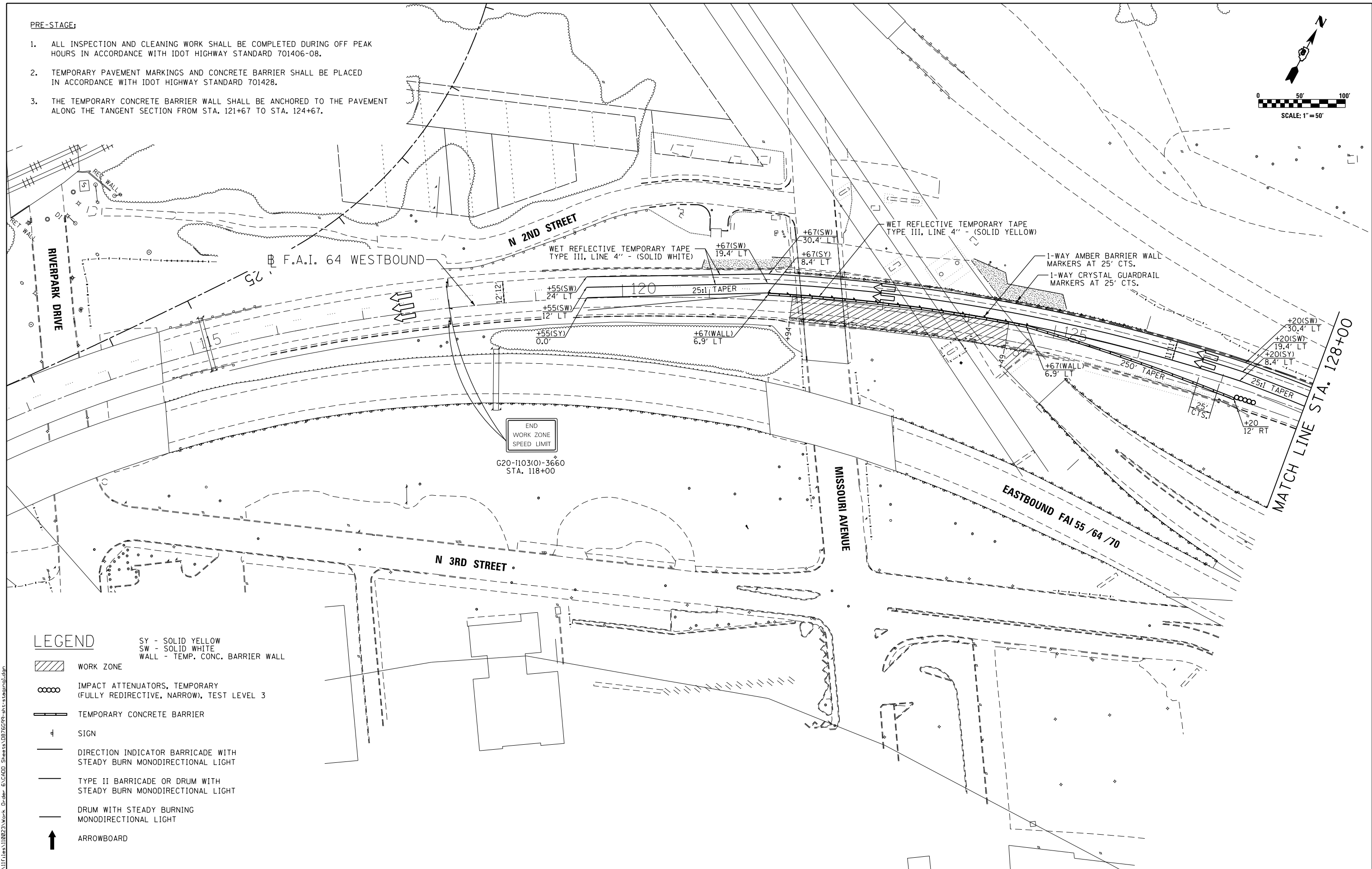
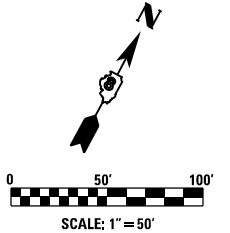
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55/70/64	82-4T-1	ST. CLAIR	185	21
CONTRACT NO. 76C99				
ILLINOIS FED. AID PROJECT				

FILE NAME = G:\115\110023\Work Order 6\CADD Sheets\0876G99-sh-t-21B.dgn



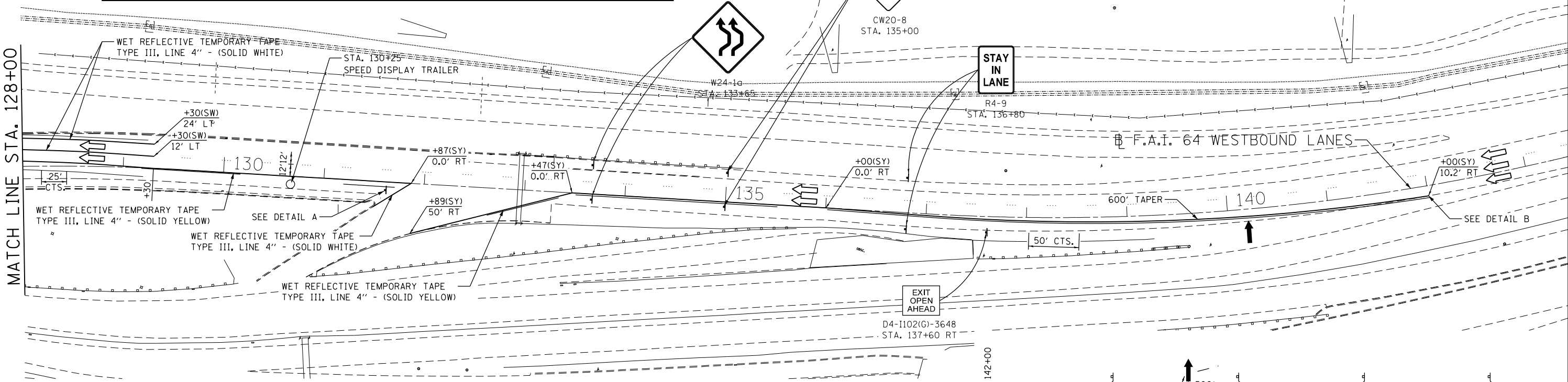
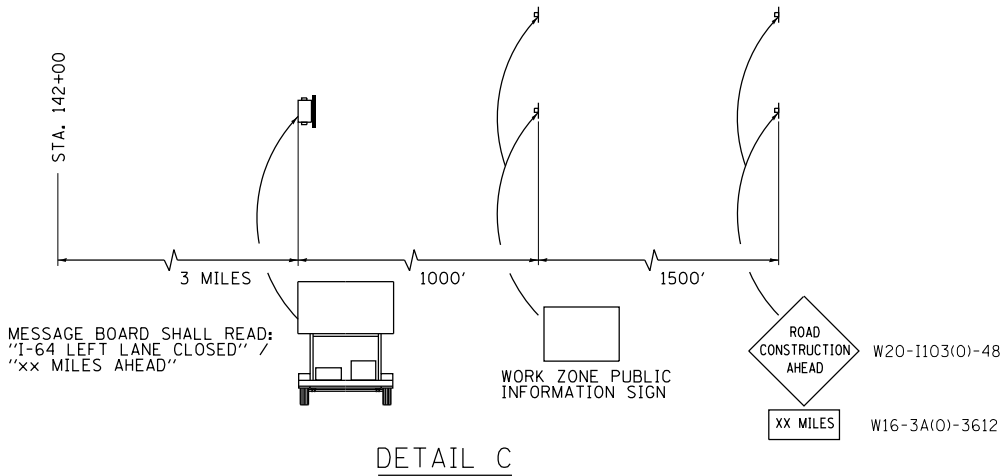
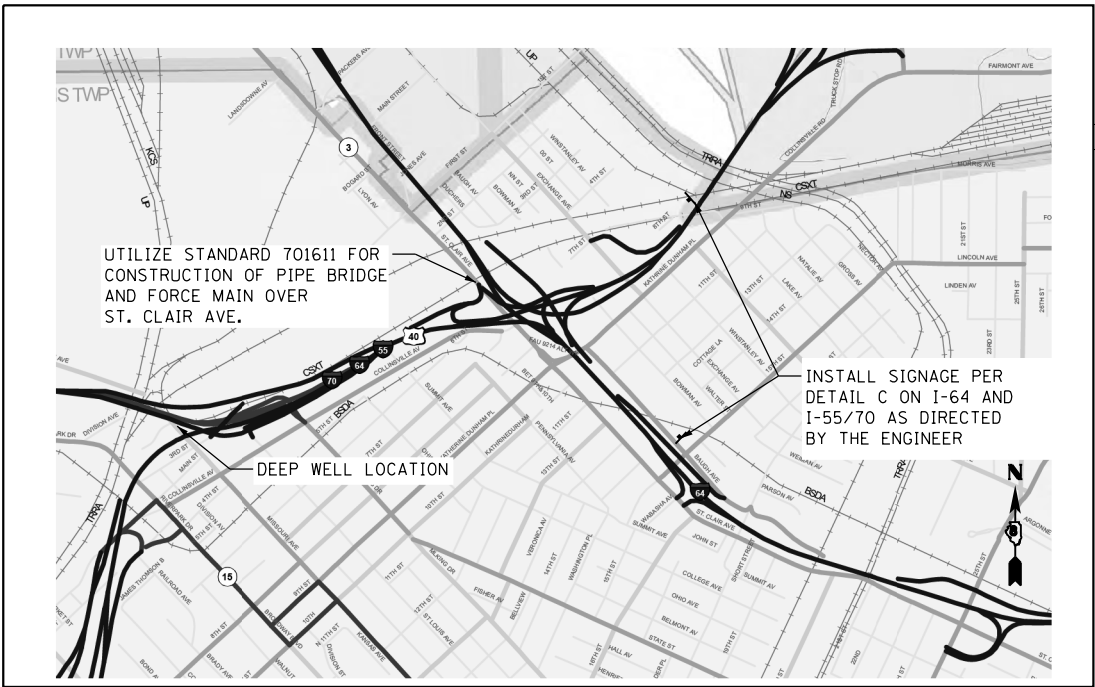
PRE-STAGE:

1. ALL INSPECTION AND CLEANING WORK SHALL BE COMPLETED DURING OFF PEAK HOURS IN ACCORDANCE WITH IDOT HIGHWAY STANDARD 701406-08.
2. TEMPORARY PAVEMENT MARKINGS AND CONCRETE BARRIER SHALL BE PLACED IN ACCORDANCE WITH IDOT HIGHWAY STANDARD 701428.
3. THE TEMPORARY CONCRETE BARRIER WALL SHALL BE ANCHORED TO THE PAVEMENT ALONG THE TANGENT SECTION FROM STA. 121+67 TO STA. 124+67.



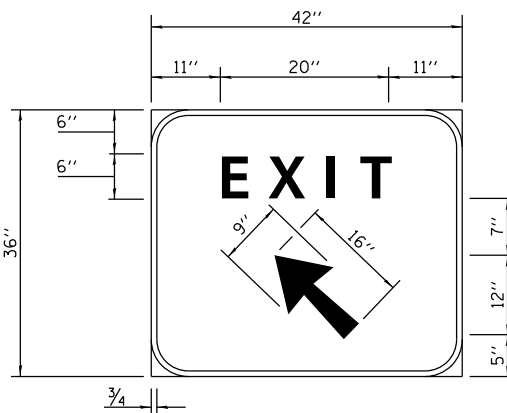
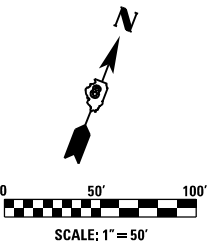
LEGEND

- WORK ZONE
 - IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3
 - TEMPORARY CONCRETE BARRIER
 - SIGN
 - DIRECTION INDICATOR BARRICADE WITH STEADY BURN MONODIRECTIONAL LIGHT
 - TYPE II BARRICADE OR DRUM WITH STEADY BURN MONODIRECTIONAL LIGHT
 - DRUM WITH STEADY BURNING MONODIRECTIONAL LIGHT
 - ARROWBOARD
- SY - SOLID YELLOW
SW - SOLID WHITE
WALL - TEMP. CONC. BARRIER WALL



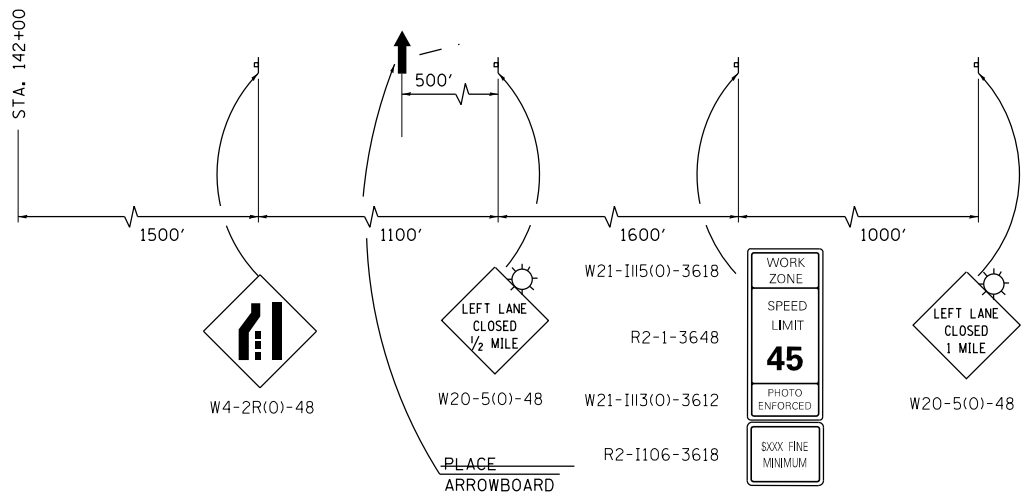
LEGEND

- WORK ZONE
- IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3
- TEMPORARY CONCRETE BARRIER
- SIGN
- DIRECTION INDICATOR BARRICADE WITH STEADY BURN MONODIRECTIONAL LIGHT
- TYPE II BARRICADE OR DRUM WITH STEADY BURN MONODIRECTIONAL LIGHT
- DRUM WITH STEADY BURNING MONODIRECTIONAL LIGHT
- ARROWBOARD



BACKGROUND - GREEN
BORDER AND LEGEND - WHITE
"D" SIZE LETTERS
ALL DIMENSIONS SHOWN ARE IN INCHES
EXIT SIGN - SPECIAL
STA. 131+60 RT

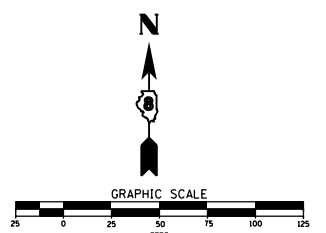
DETAIL A



DETAIL B

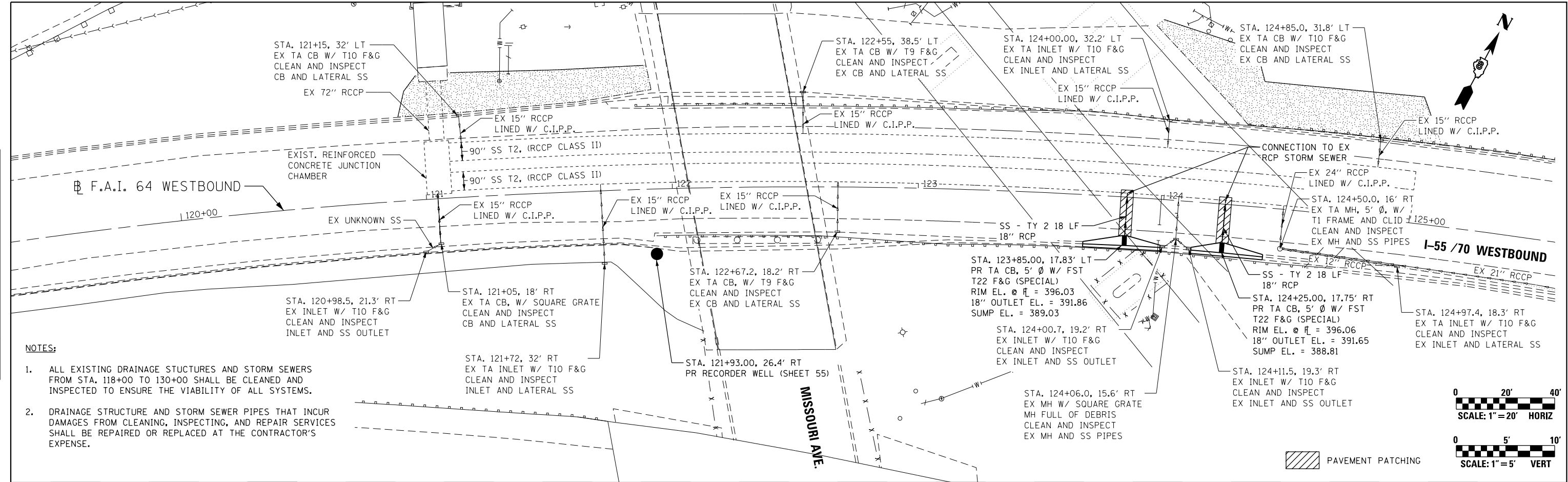
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UTILIZE HIGHWAY STANDARD 701801 FOR ANY SIDEWALK CLOSURES AS DIRECTED BY THE ENGINEER. SIDEWALK CLOSURES SHALL BE INCIDENTAL TO THE TRAFFIC CONTROL PAY ITEMS.



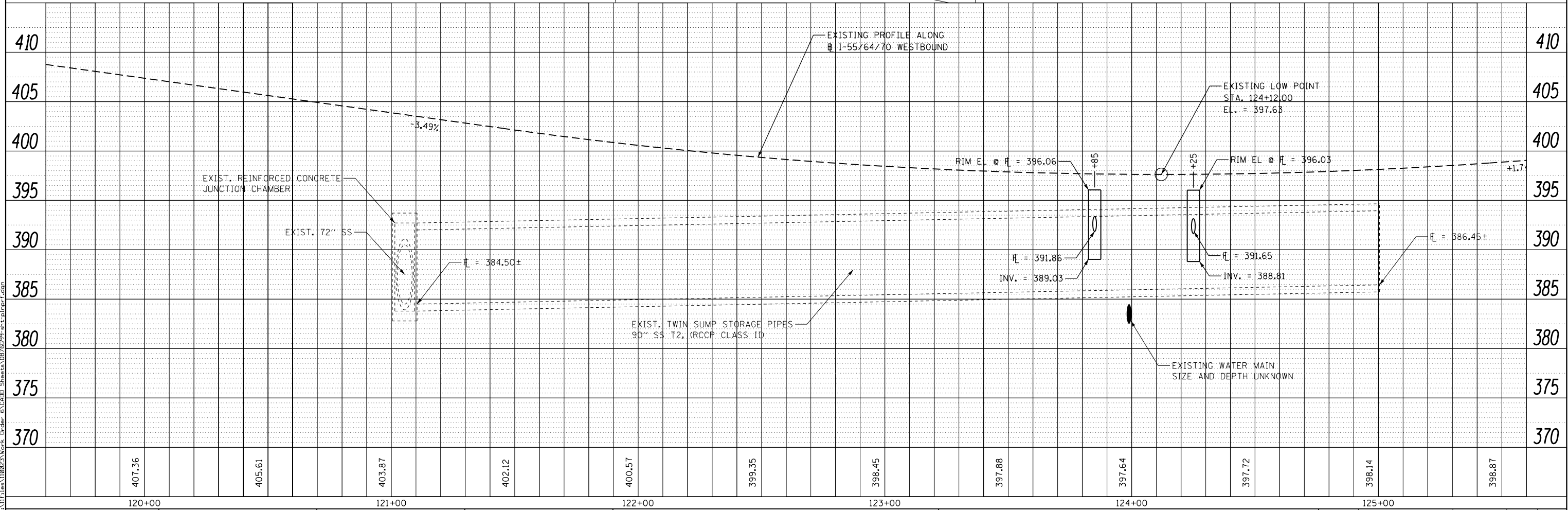
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NOTE BOOK NO.	PLOTTED		
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	FILED		
	CADD FILE NAME		

PROFILE	SURVEYED	BY	DATE
NOTE BOOK NO.	GRADES CHECKED		
	STRUCTURE NOTATIONS CHKD		



NOTES:

1. ALL EXISTING DRAINAGE STRUCTURES AND STORM SEWERS FROM STA. 118+00 TO 130+00 SHALL BE CLEANED AND INSPECTED TO ENSURE THE VIABILITY OF ALL SYSTEMS.
2. DRAINAGE STRUCTURE AND STORM SEWER PIPES THAT INCUR DAMAGES FROM CLEANING, INSPECTING, AND REPAIR SERVICES SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.



LIN ENGINEERING, LTD.
Consulting Engineers
Springfield, Illinois

USER NAME = bgj	DESIGNED - SEL	REVISED -
	DRAWN - SEL	REVISED -
PLOT SCALE = 1/8" = 1' / in.	CHECKED - SGL	REVISED -
PLOT DATE = 1/13/2015	DATE - 7/1/2014	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

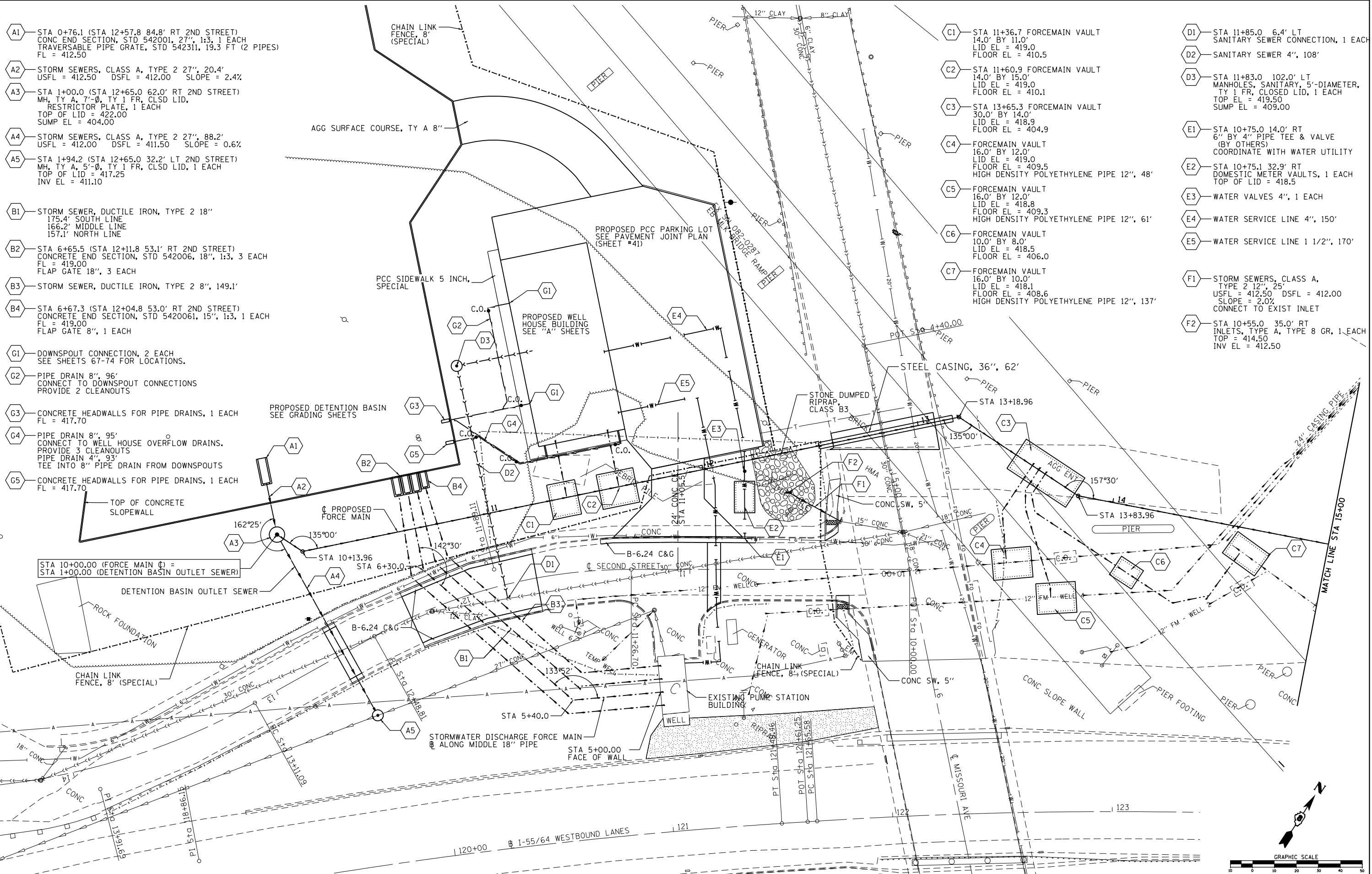
I-55/64 PLAN AND PROFILE
MISSOURI AVENUE DEEP WELL FACILITY

1" = 20' SHEET 1 OF 1 SHEETS STA. 119+60 TO STA. 125+60

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55/70/64	82-4T-1	ST. CLAIR	185	26
CONTRACT NO. 76G99				
ILLINOIS FED. AID PROJECT				

FILE NAME = G:\115\110023\Work - Order 6\CAD\ Sheets\0376099-sht-1-plan.dgn

- A1 - STA 0+76.1 (STA 12+57.8 84.8' RT 2ND STREET)
CONC END SECTION, STD 542001, 27", 1:3, 1 EACH
TRAVERSABLE PIPE GRATE, STD 542311, 19.3 FT (2 PIPES)
FL = 412.50
- A2 - STORM SEWERS, CLASS A, TYPE 2 27", 20.4'
USFL = 412.50 DSFL = 412.00 SLOPE = 2.4%
- A3 - STA 1+00.0 (STA 12+65.0 62.0' RT 2ND STREET)
MH, TY A, 7'-0", TY 1 FR, CLSD LID,
RESTRICTOR PLATE, 1 EACH
TOP OF LID = 422.00
SUMP EL = 404.00
- A4 - STORM SEWERS, CLASS A, TYPE 2 27", 88.2'
USFL = 412.00 DSFL = 411.50 SLOPE = 0.6%
- A5 - STA 1+94.2 (STA 12+65.0 32.2' LT 2ND STREET)
MH, TY A, 5'-0", TY 1 FR, CLSD LID, 1 EACH
TOP OF LID = 417.25
INV EL = 411.10
- B1 - STORM SEWER, DUCTILE IRON, TYPE 2 18"
175.4' SOUTH LINE
166.2' MIDDLE LINE
157.1' NORTH LINE
- B2 - STA 6+65.5 (STA 12+11.8 53.1' RT 2ND STREET)
CONCRETE END SECTION, STD 542006, 18", 1:3, 3 EACH
FL = 419.00
FLAP GATE 18", 3 EACH
- B3 - STORM SEWER, DUCTILE IRON, TYPE 2 8", 149.1'
- B4 - STA 6+67.3 (STA 12+04.8 53.0' RT 2ND STREET)
CONCRETE END SECTION, STD 542006, 15", 1:3, 1 EACH
FL = 419.00
FLAP GATE 8", 1 EACH
- G1 - DOWNSPOUT CONNECTION, 2 EACH
SEE SHEETS 67-74 FOR LOCATIONS.
- G2 - PIPE DRAIN 8", 96'
CONNECT TO DOWNSPOUT CONNECTIONS
PROVIDE 2 CLEANOUTS
- G3 - CONCRETE HEADWALLS FOR PIPE DRAINS, 1 EACH
FL = 417.70
- G4 - PIPE DRAIN 8", 95'
CONNECT TO WELL HOUSE OVERFLOW DRAINS.
PROVIDE 3 CLEANOUTS
PIPE DRAIN 4", 93'
TEE INTO 8" PIPE DRAIN FROM DOWNSPOUTS
- G5 - CONCRETE HEADWALLS FOR PIPE DRAINS, 1 EACH
FL = 417.70



KLINGNER & ASSOCIATES, P.C.
Engineers • Architects • Surveyors

USER NAME = seb
PLOT SCALE = 40.0000' / in.
PLOT DATE = 1/14/2015

DESIGNED - SEB
DRAWN - SEB
CHECKED -
DATE -

REVISED -
REVISED -
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

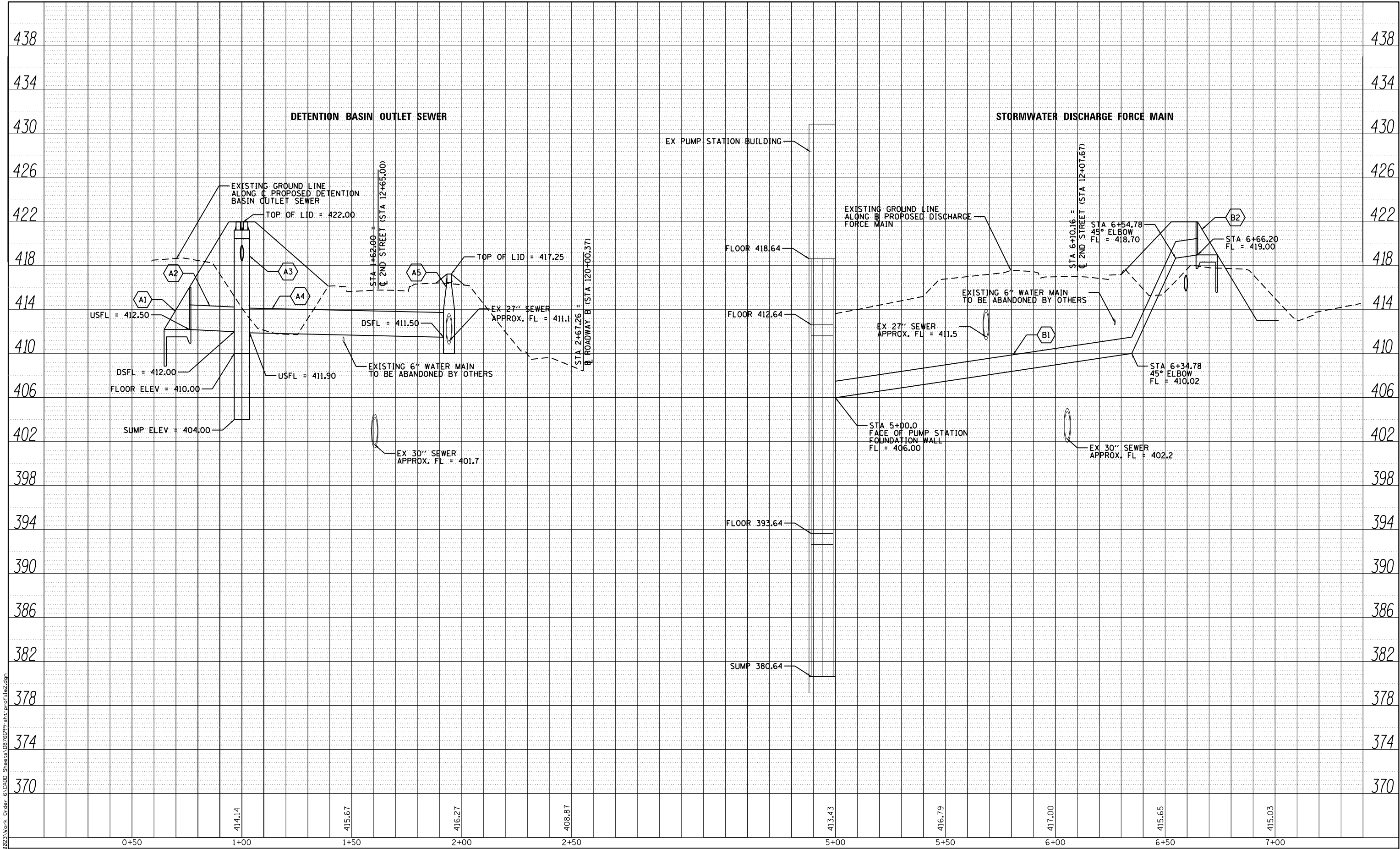
PROPOSED FORCE MAIN & UTILITY PLAN
MISSOURI AVENUE DEEP WELL FACILITY

SCALE: 1"=20' SHEET 1 OF 12 SHEETS STA. 10+00 TO STA. 15+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55/70/64	82-4T-1	ST. CLAIR	185	27
CONTRACT NO. 76099				
ILLINOIS FED. AID PROJECT				

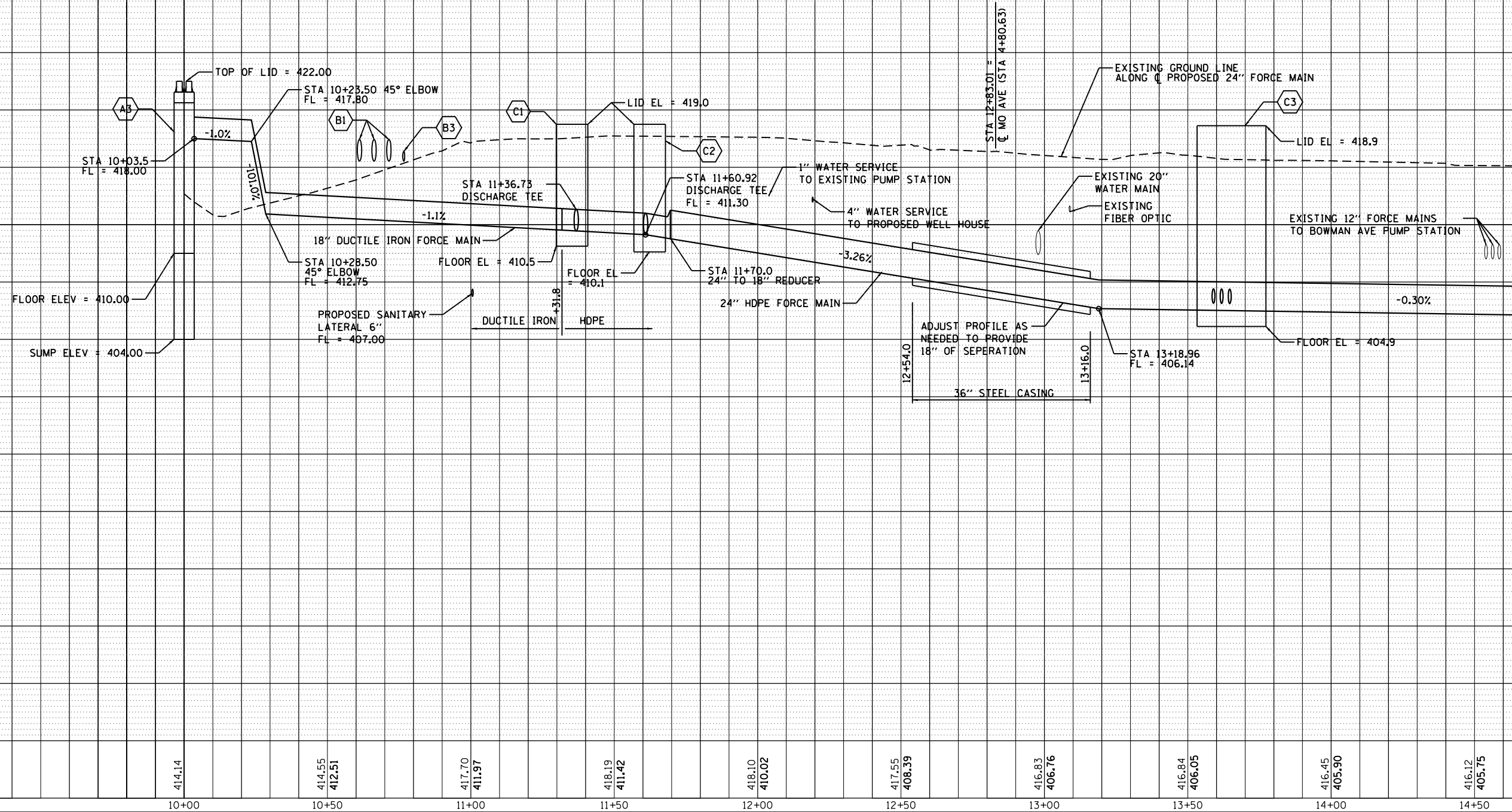
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PROFILE	SURVEYED PLOTTED NOTE BOOK NO.	CHECKED DATE FILE NAME	BY	DATE

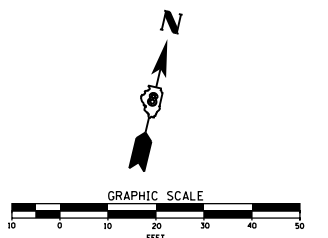


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NOTE BOOK	ALIGNMENT CHECKED		
	RT. OF WAY CHECKED		
NO. _____	CADD FILE NAME		

PROFILE		BY	DATE
SURVEYED _____			
PLOTTED _____			
GRADES CHECKED _____			
B.M. NOTED _____			
STRUCTURE NOTED AS CHK'D _____			
NO. _____			



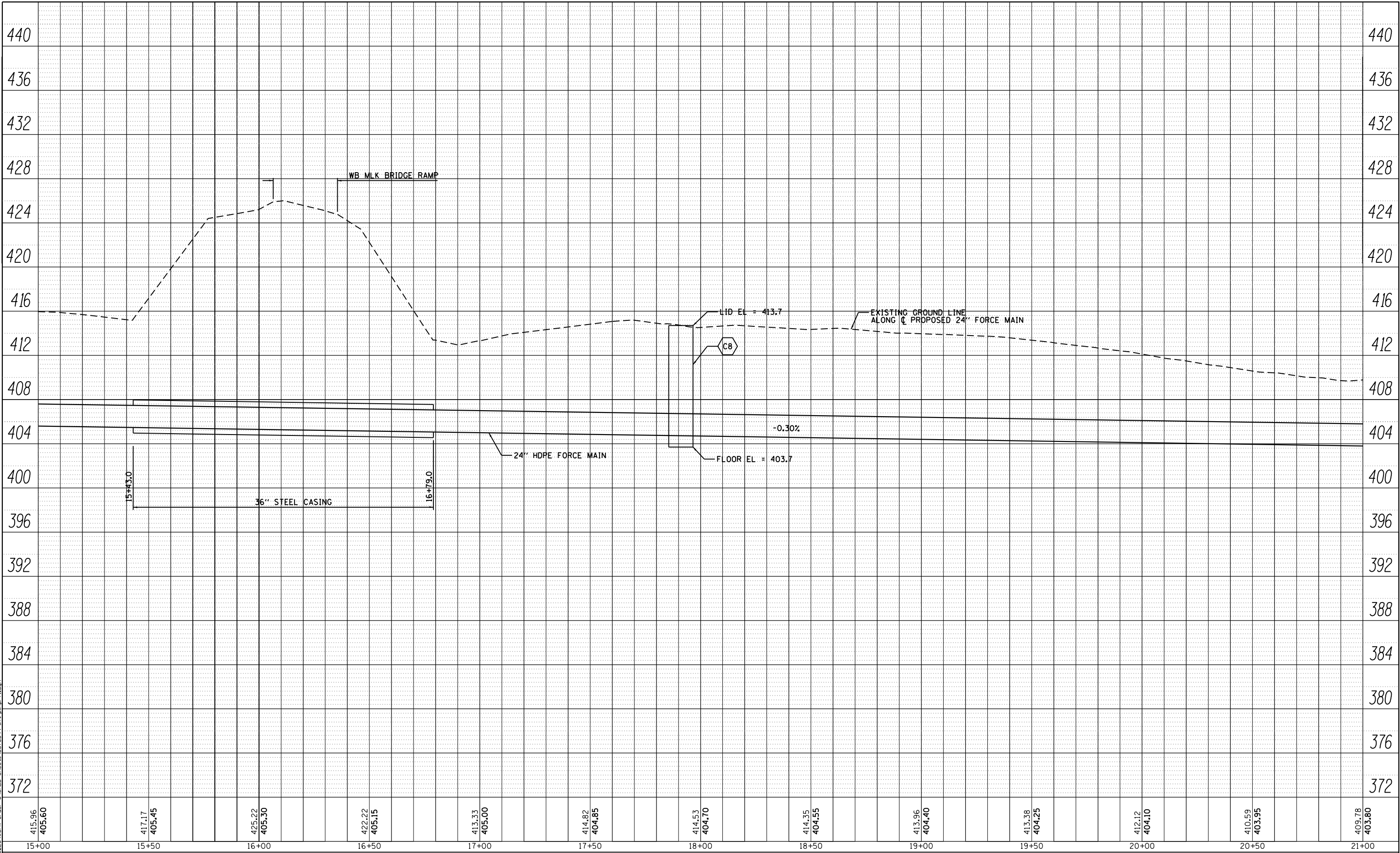
C8—STA 17+91.1 FORCEMAIN VAULT
11.0' BY 8.0'
LID EL = 413.7
FLOOR EL = 403.7



PLAN	SURVEYED	BY	DATE
	PLOTTED		
NOTE BOOK NO.	CHECKED		
	FILED		
CADD FILE NAME			

PROFILE	SURVEYED	BY	DATE
	PLOTTED		
NOTE BOOK NO.	GRADES CHECKED		
	STRUCTURE NOTATIONS CHKD		

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KLINGNER & ASSOCIATES, P.C.
Engineers • Architects • Surveyors

USER NAME = bgj	DESIGNED - SEB	REVISED -
	DRAWN - SEB	REVISED -
PLOT SCALE = 40.0000' / in.	CHECKED -	REVISED -
PLOT DATE = 1/13/2015	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FORCE MAIN PLAN AND PROFILE
MISSOURI AVENUE DEEP WELL FACILITY

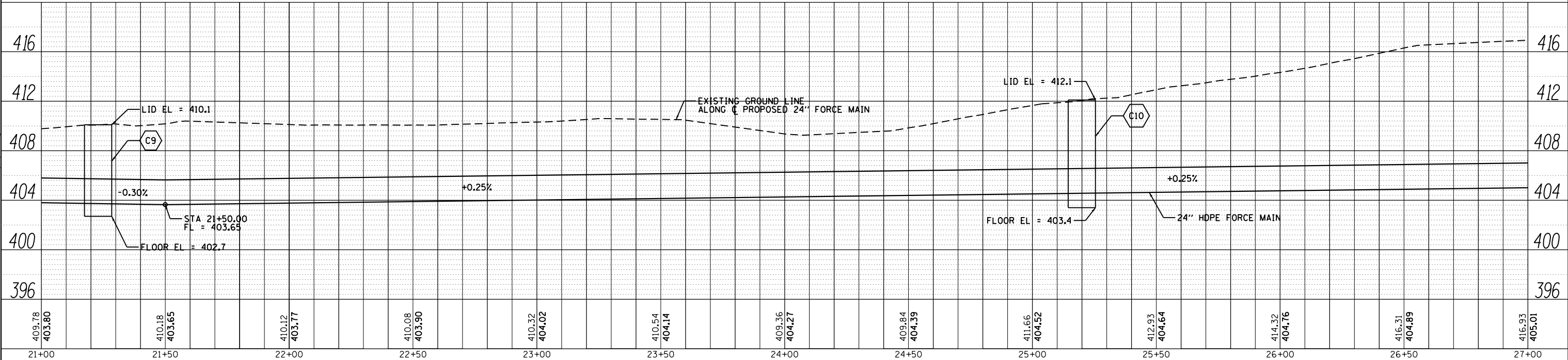
SCALE: SHEET 5 OF 12 SHEETS STA. 15+00 TO STA. 21+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55/70/64	82-4T-1	ST. CLAIR	185	31
CONTRACT NO. 76099				
ILLINOIS FED. AID PROJECT				

PLAN	SURVEYED	BY	DATE
	PLOTTED		
NOTE BOOK NO.	CHECKED		
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PROFILE	SURVEYED	BY	DATE
	PLOTTED		
NOTE BOOK NO.	GRADES CHECKED		
	STRUCTURE NOTATIONS CHKD		

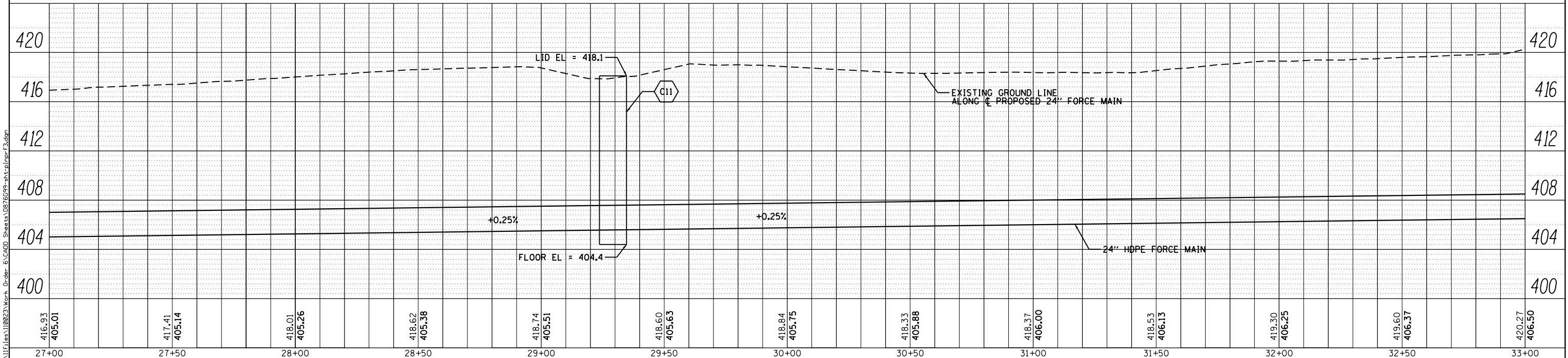
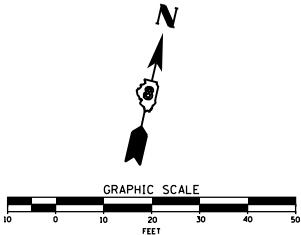
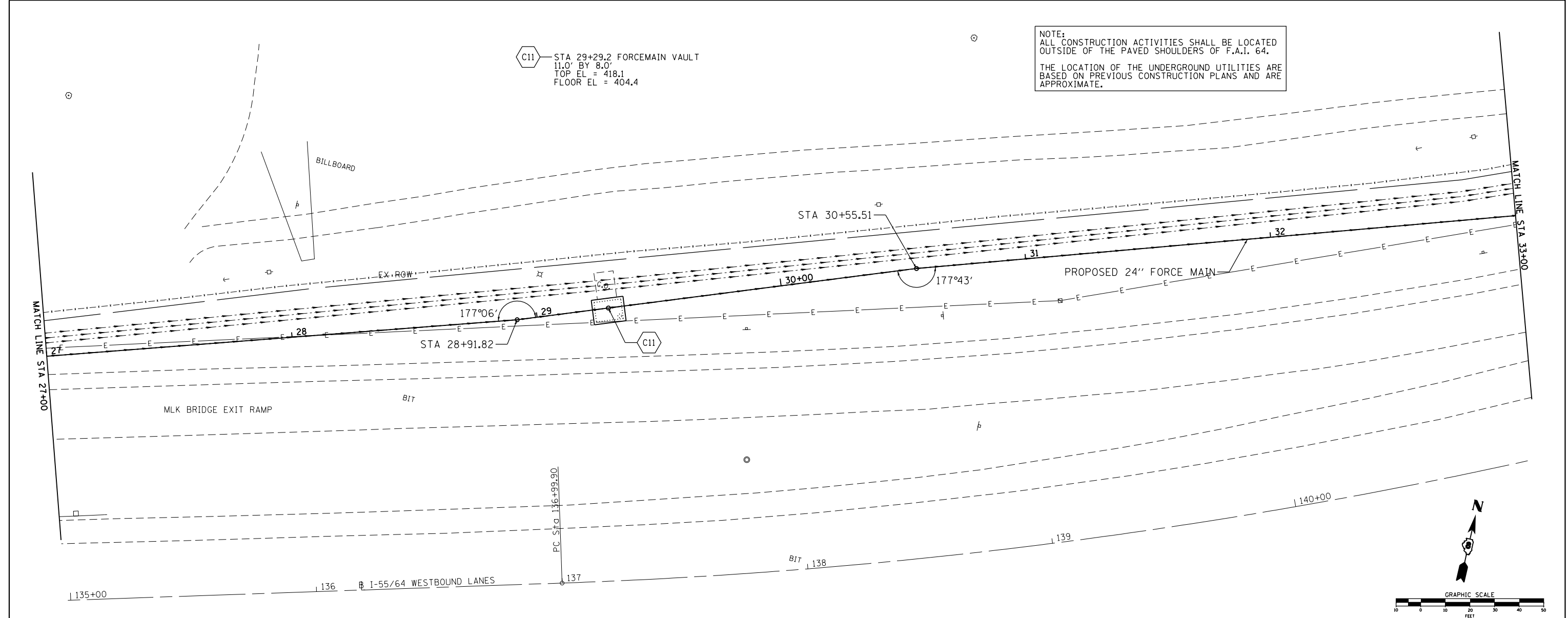
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KLINGNER & ASSOCIATES, P.C. Engineers • Architects • Surveyors	USER NAME = bgj	DESIGNED - SEB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	FORCE MAIN PLAN AND PROFILE MISSOURI AVENUE DEEP WELL FACILITY				F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN - SEB	REVISED -						55/70/64	82-4T-1	ST. CLAIR	185	32
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	PLOT DATE = 1/13/2015	DATE -	REVISED -						ILLINOIS FED. AID PROJECT				
SCALE: 1"=20'		SHEET 6 OF 12 SHEETS			STA. 21+00 TO STA. 27+00								

PLAN	SURVEYED	BY	DATE
	PLOTTED		
	ALIGNED		
	CHECKED		
	FILED		
	NO.		

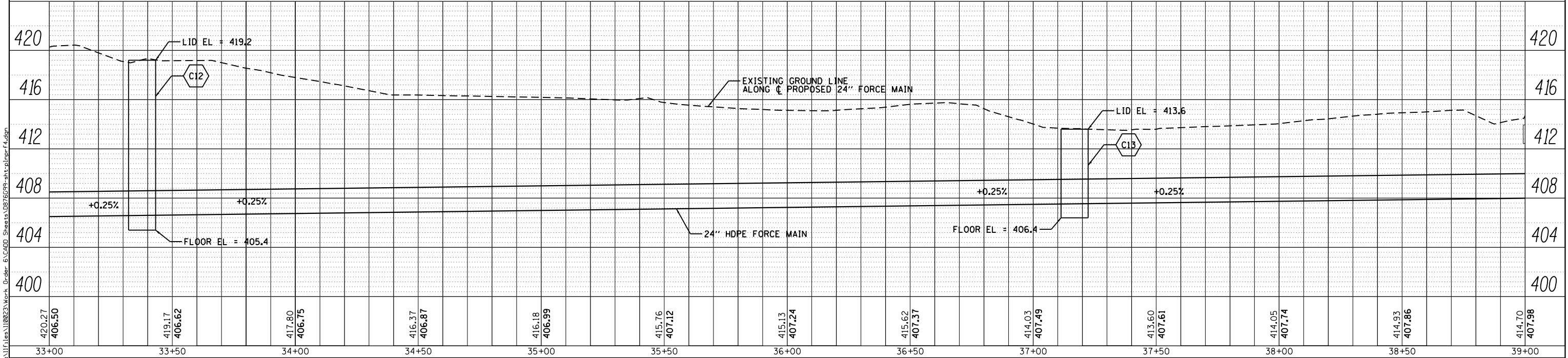
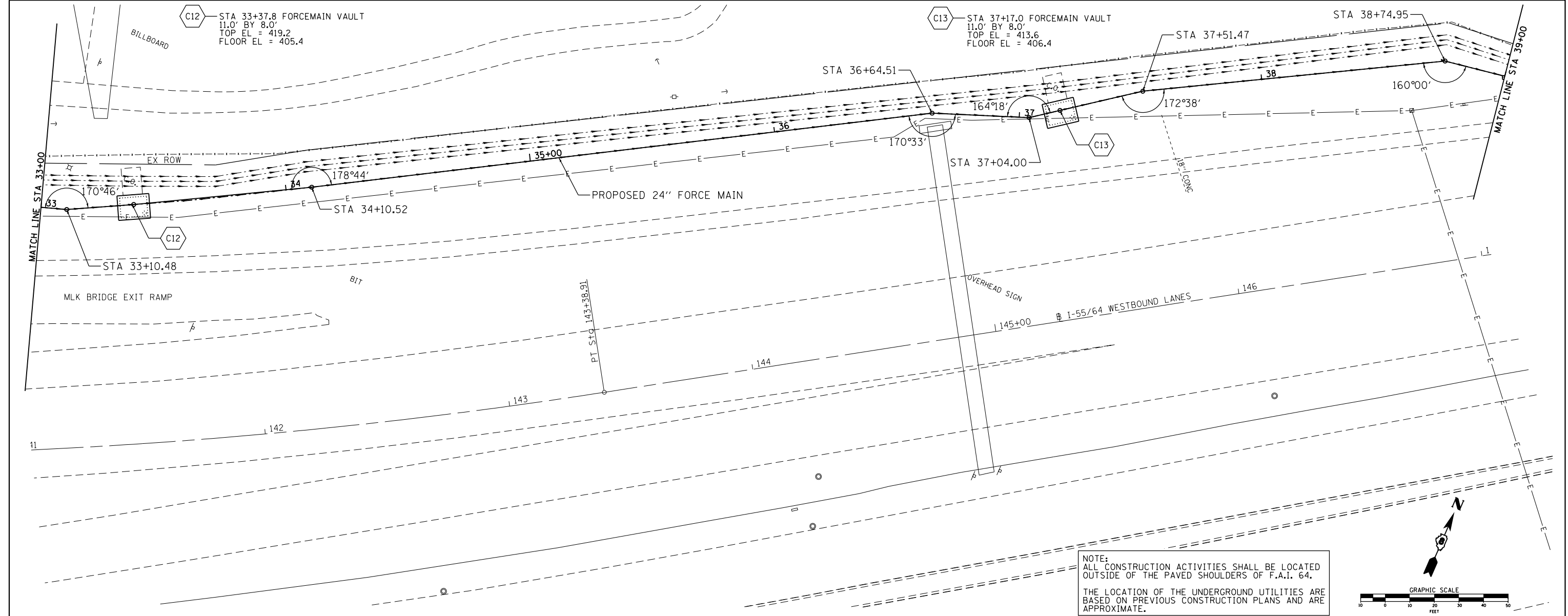
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	PLOTTED		
	GRADES		
	CHECKED		
	STRUCTURE		
	NOTATIONS		
	CHKD		



KLINGNER & ASSOCIATES, P.C. Engineers • Architects • Surveyors	USER NAME = bgj	DESIGNED - SEB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	FORCE MAIN PLAN AND PROFILE MISSOURI AVENUE DEEP WELL FACILITY				F.A.I. RTE. 55/70/64	SECTION 82-4T-1	COUNTY ST. CLAIR	TOTAL SHEETS 185	SHEET NO. 33	
	PLOT SCALE = 40.0000' / in.	CHECKED -	DRAWN - SEB		REVISED -	SCALE: 1"=20'				SHEET 7 OF 12 SHEETS				CONTRACT NO. 76099
	PLOT DATE = 1/13/2015	DATE -			REVISED -	STA. 27+00 TO STA. 33+00				ILLINOIS FED. AID PROJECT				

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NO.	BY	
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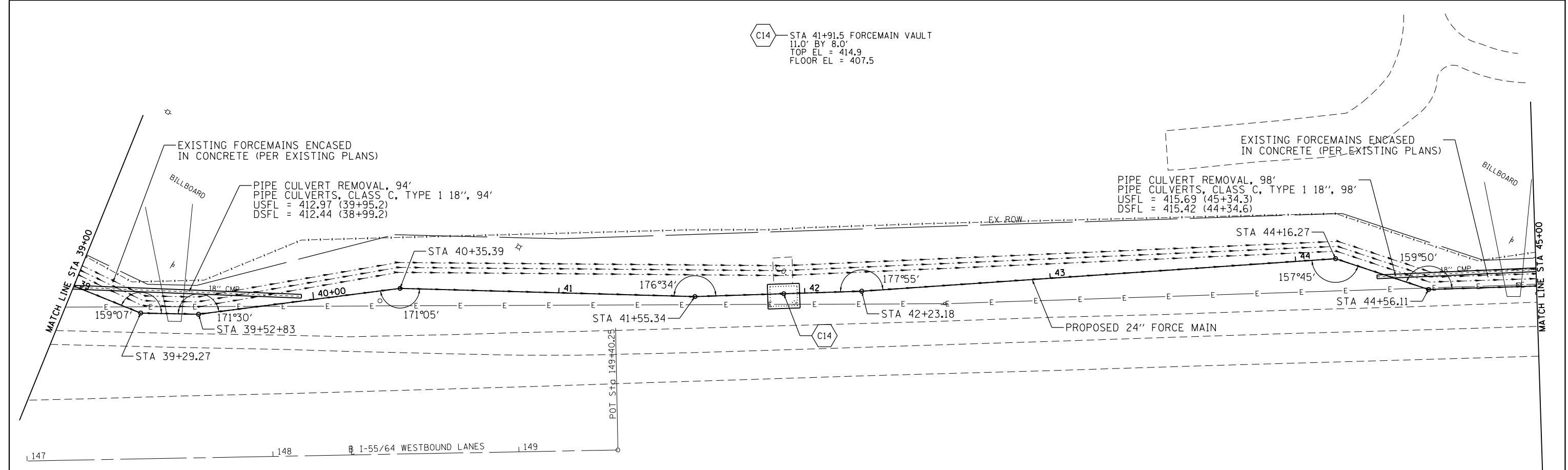
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NOTE BOOK	GRADES CHECKED _____		
	B.M. NOTED _____		
NO. _____	STRUCTURE NOTATIONS CHK'D _____		



FILE NAME = KLINGNER & ASSOCIATES, P.C. Engineers • Architects • Surveyors	USER NAME = bgj	DESIGNED - SEB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	FORCE MAIN PLAN AND PROFILE MISSOURI AVENUE DEEP WELL FACILITY			F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 40.0000' / in.	DRAWN - SEB	REVISED -					55/70/64	82-4T-1	ST. CLAIR	185	34
	PLOT DATE = 1/13/2015	CHECKED -	REVISED -		SCALE: 1"=20'			SHEET 8 OF 12 SHEETS	STA. 33+00 TO STA. 39+00	CONTRACT NO. 76G99		
	DATE -	REVISED -	ILLINOIS FED. AID PROJECT									

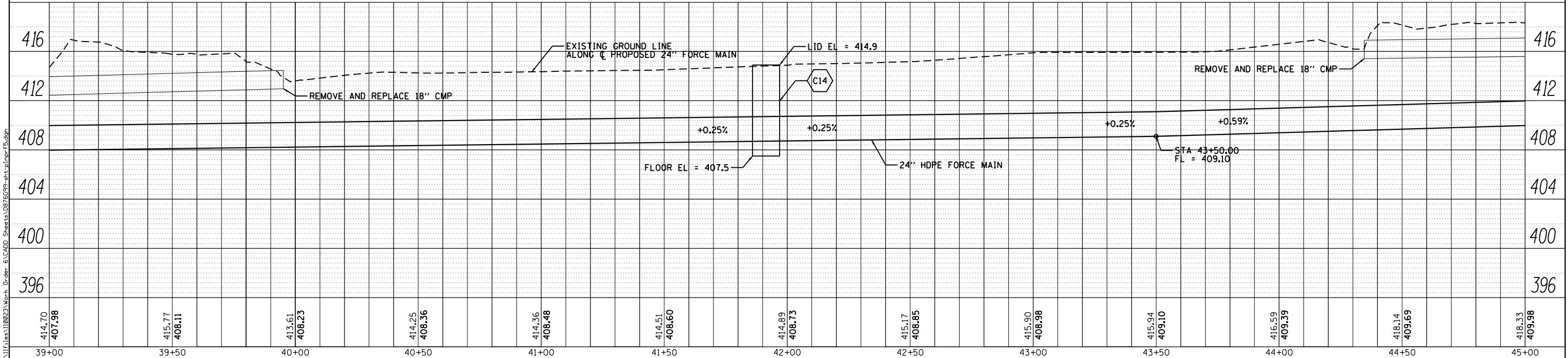
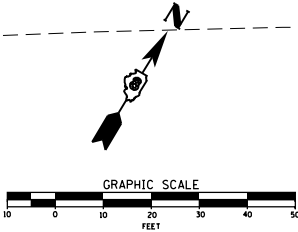
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NO.	FILE NAME		



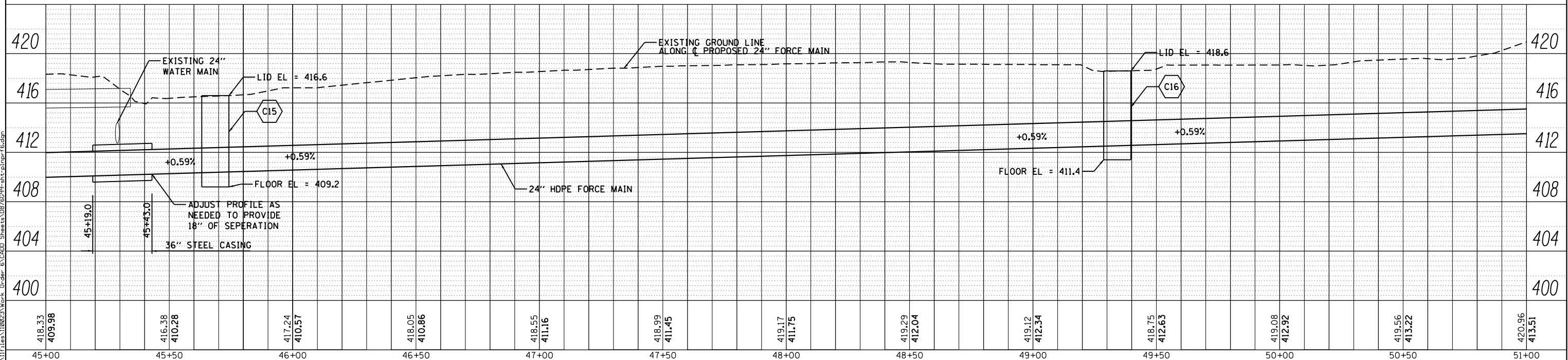
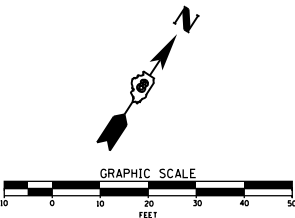
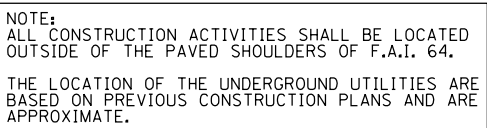
NOTE:
ALL CONSTRUCTION ACTIVITIES SHALL BE LOCATED
OUTSIDE OF THE PAVED SHOULDERS OF F.A.I. 64.

THE LOCATION OF THE UNDERGROUND UTILITIES ARE
BASED ON PREVIOUS CONSTRUCTION PLANS AND ARE
APPROXIMATE.



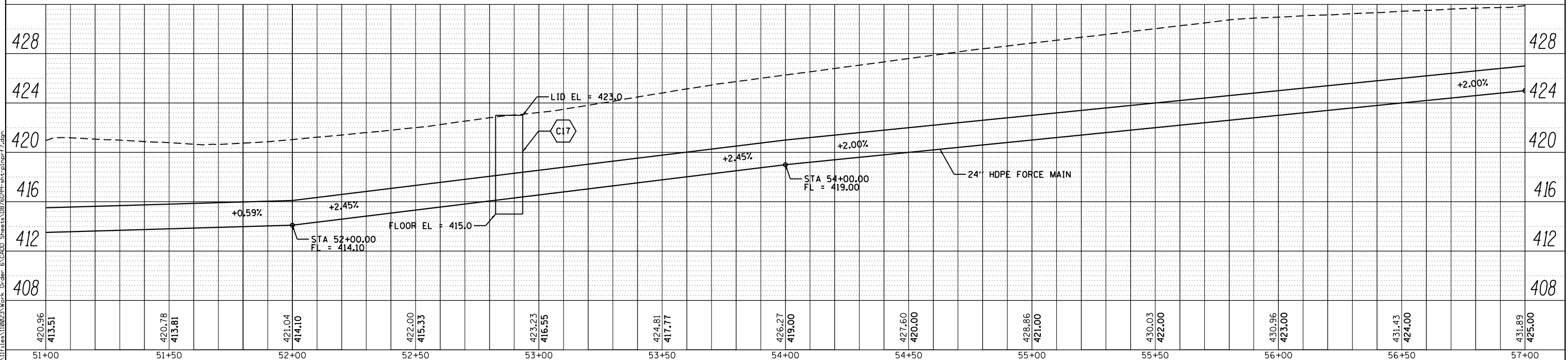
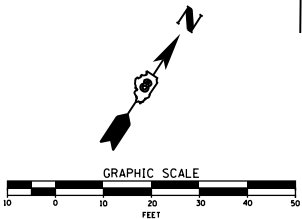
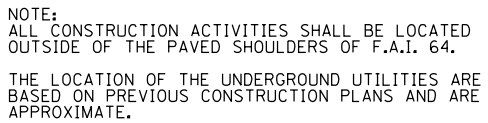
KLINGNER & ASSOCIATES, P.C. Engineers • Architects • Surveyors				STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION				FORCE MAIN PLAN AND PROFILE MISSOURI AVENUE DEEP WELL FACILITY				F.A.I. RTE. 55/70/64 SECTION 82-4T-1 COUNTY ST. CLAIR TOTAL SHEETS 185 SHEET NO. 35 CONTRACT NO. 76099			
USER NAME : bgj				DESIGNED - SEB				SCALE: 1"=20'				ILLINOIS FED. AID PROJECT			
DRAWN - SEB				PLOT SCALE : 40.0000 ' / in.				SHEET 9 OF 12 SHEETS							
CHECKED -				PLOT DATE : 1/13/2015				STA. 39+00 TO STA. 45+00							
DATE -															

PROFILE	SURVEYED _____	BY _____	DATE _____
	PLOTTED _____		
NOTE BOOK _____	GRADES CHECKED _____		
NO. _____	B.M. NOTED _____		
	STRUCTURE NOTAT'NS CH'KD _____		



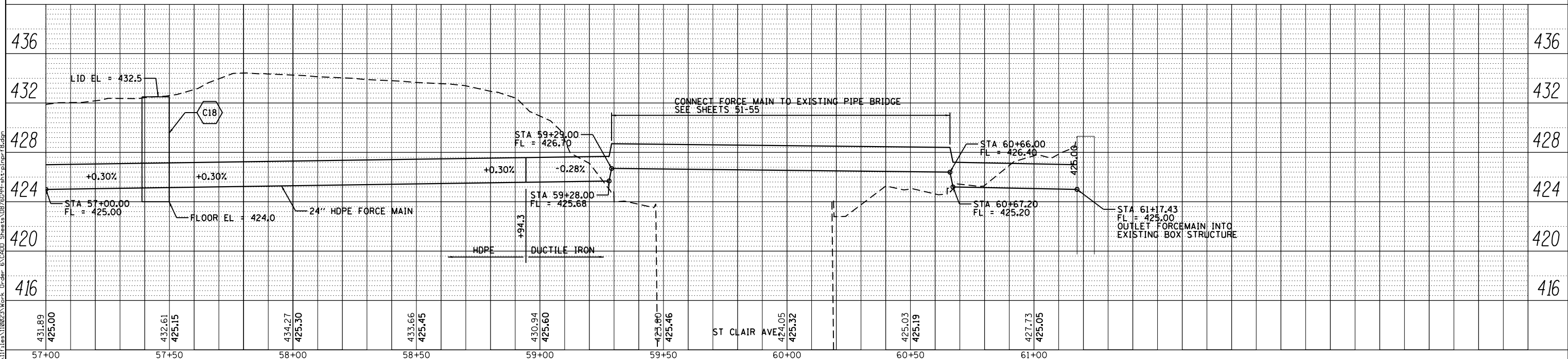
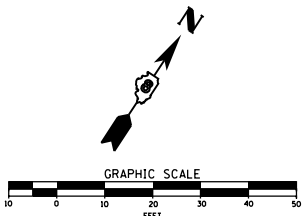
 KLINGNER & ASSOCIATES, P.C. Engineers • Architects • Surveyors	USER NAME = bgj	DESIGNED - SEB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	FORCE MAIN PLAN AND PROFILE MISSOURI AVENUE DEEP WELL FACILITY				F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN - SEB	REVISED -						55/70/64	82-4T-1	ST. CLAIR	185	36
	PLOT SCALE = 40.0000' / in.	CHECKED -	REVISED -		CONTRACT NO. 76G999								
	PLOT DATE = 1/13/2015	DATE -	REVISED -		SCALE: 1"=20'	SHEET 10 OF 12 SHEETS	STA. 45+00 TO STA. 51+00	ILLINOIS FED. AID PROJECT					

PROFILE	SURVEYED _____	BY _____	DATE _____
	PLOTTED _____		
NOTE BOOK _____	GRADES CHECKED _____		
	B.M. NOTED _____		
NO. _____	STRUCTURE NOTAT'NS CHKD _____		



KLINGNER & ASSOCIATES, P.C. Engineers • Architects • Surveyors	USER NAME = bgj	DESIGNED - SEB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	FORCE MAIN PLAN AND PROFILE MISSOURI AVENUE DEEP WELL FACILITY				F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN - SEB	REVISED -						55/70/64	82-4T-1	ST. CLAIR	185	37
	PLOT SCALE = 40.0000' / in.	CHECKED -	REVISED -		SCALE: 1"=20' SHEET 11 OF 12 SHEETS STA. 51+00 TO STA. 57+00				CONTRACT NO. 76G99				
	PLOT DATE = 1/13/2015	DATE -	REVISED -						ILLINOIS FED. AID PROJECT				

PROFILE	SURVEYED _____	BY _____	DATE _____
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NOTE BOOK _____	GRADES CHECKED _____		
NO. _____	B.M. NOTED _____		
	STRUCTURE NOTAT'NS CH'KD _____		



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KLINGNER & ASSOCIATES, P.C.
Engineers • Architects • Surveyors

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PLOT DATE = 1/13/2015	CHECKED -
	DATE -

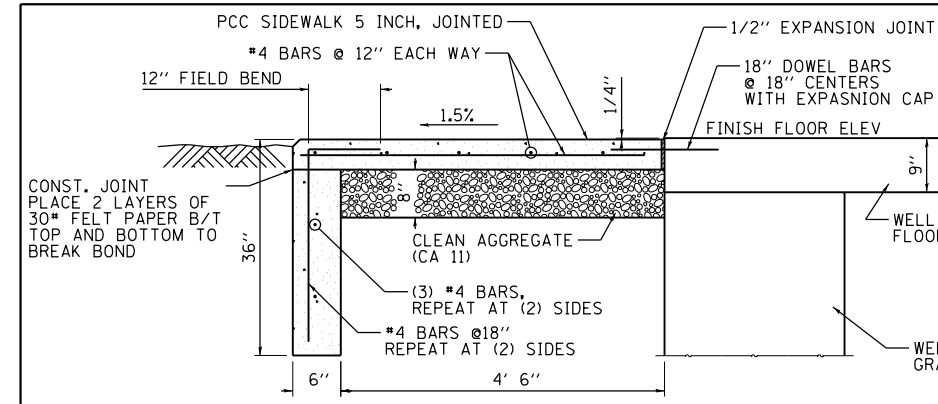
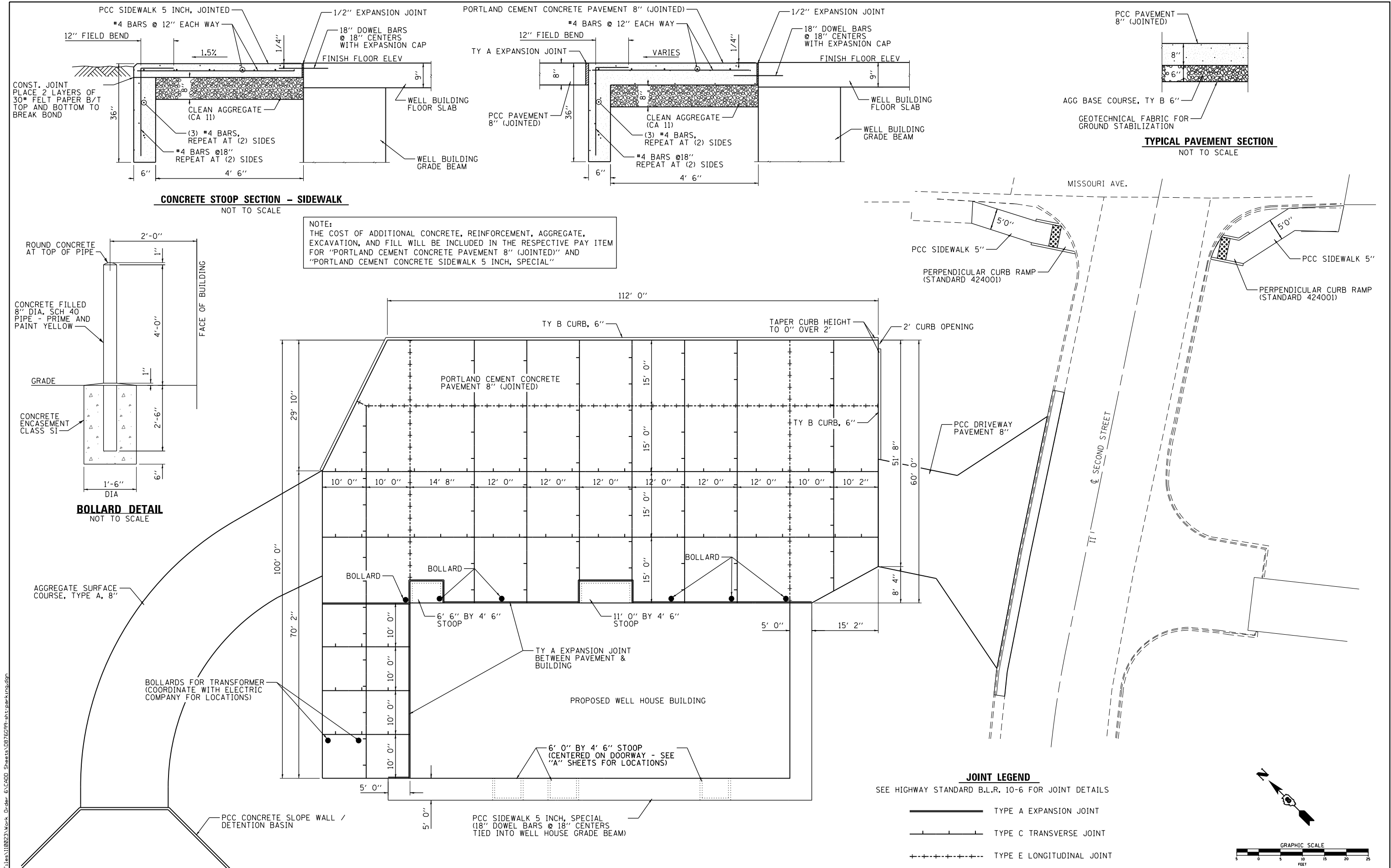
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

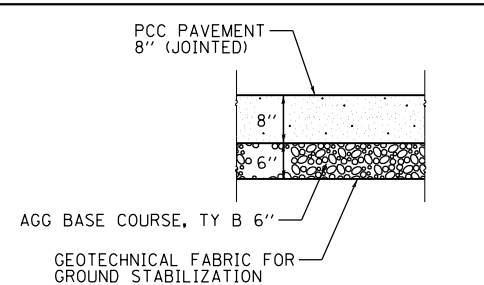
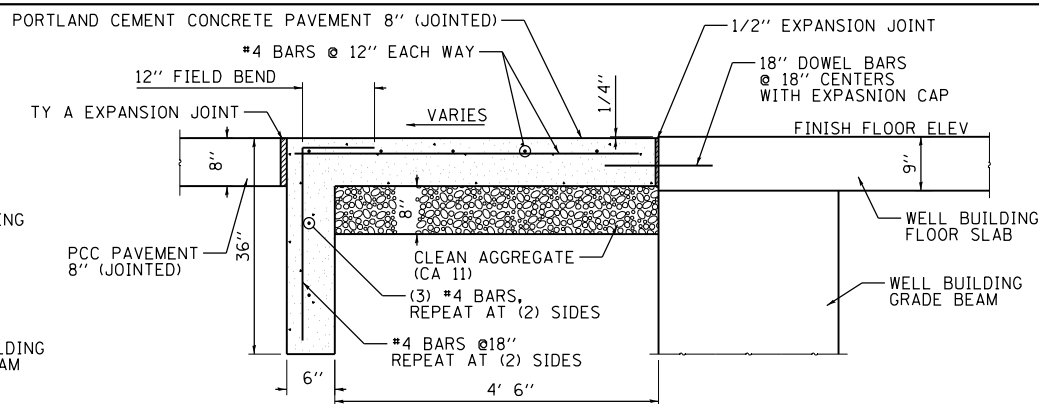
REMOVAL PLAN - WELL HOUSE SITE
MISSOURI AVENUE DEEP WELL FACILITY

SCALE: 1"=20' SHEET 1 OF 1 SHEETS STA. TO STA.

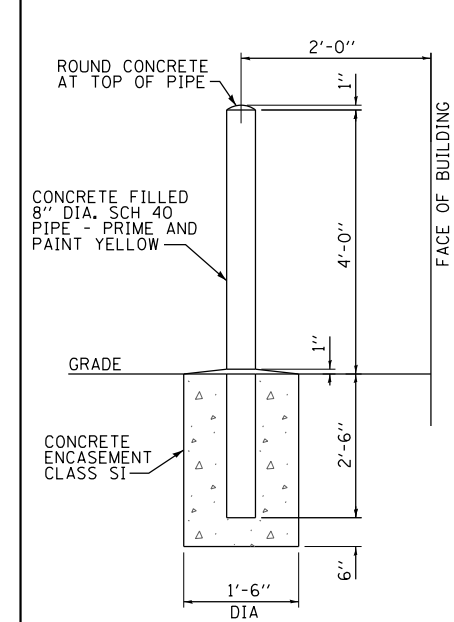
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CONTRACT NO. 76099				
ILLINOIS FED. AID PROJECT				



CONCRETE STOOP SECTION - SIDEWALK
NOT TO SCALE

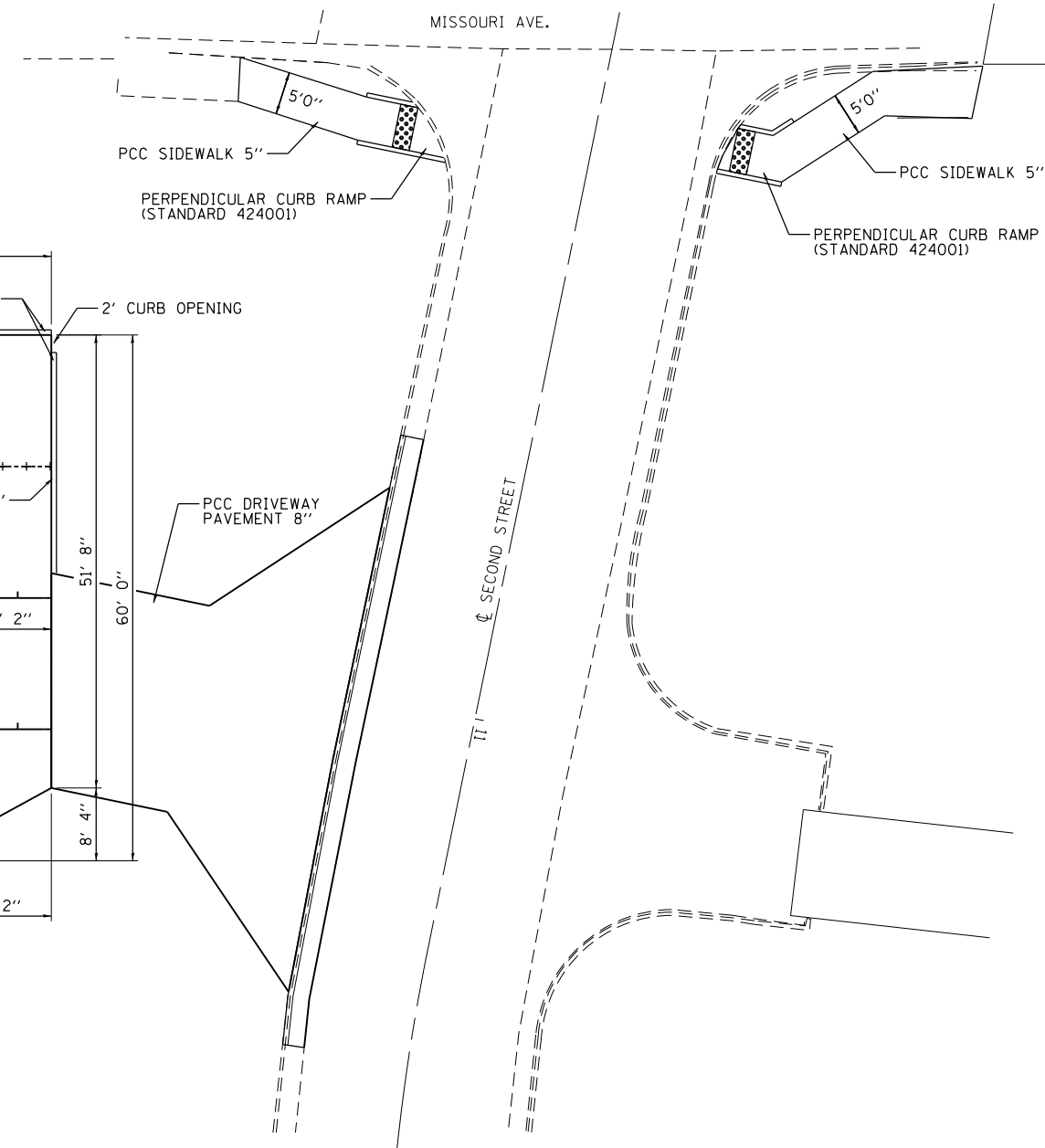


TYPICAL PAVEMENT SECTION
NOT TO SCALE



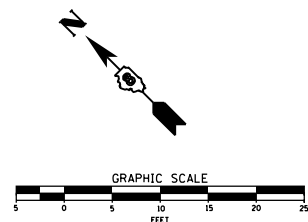
BOLLARD DETAIL
NOT TO SCALE

NOTE:
THE COST OF ADDITIONAL CONCRETE, REINFORCEMENT, AGGREGATE, EXCAVATION, AND FILL WILL BE INCLUDED IN THE RESPECTIVE PAY ITEM FOR "PORTLAND CEMENT CONCRETE PAVEMENT 8" (JOINTED)" AND "PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH, SPECIAL"

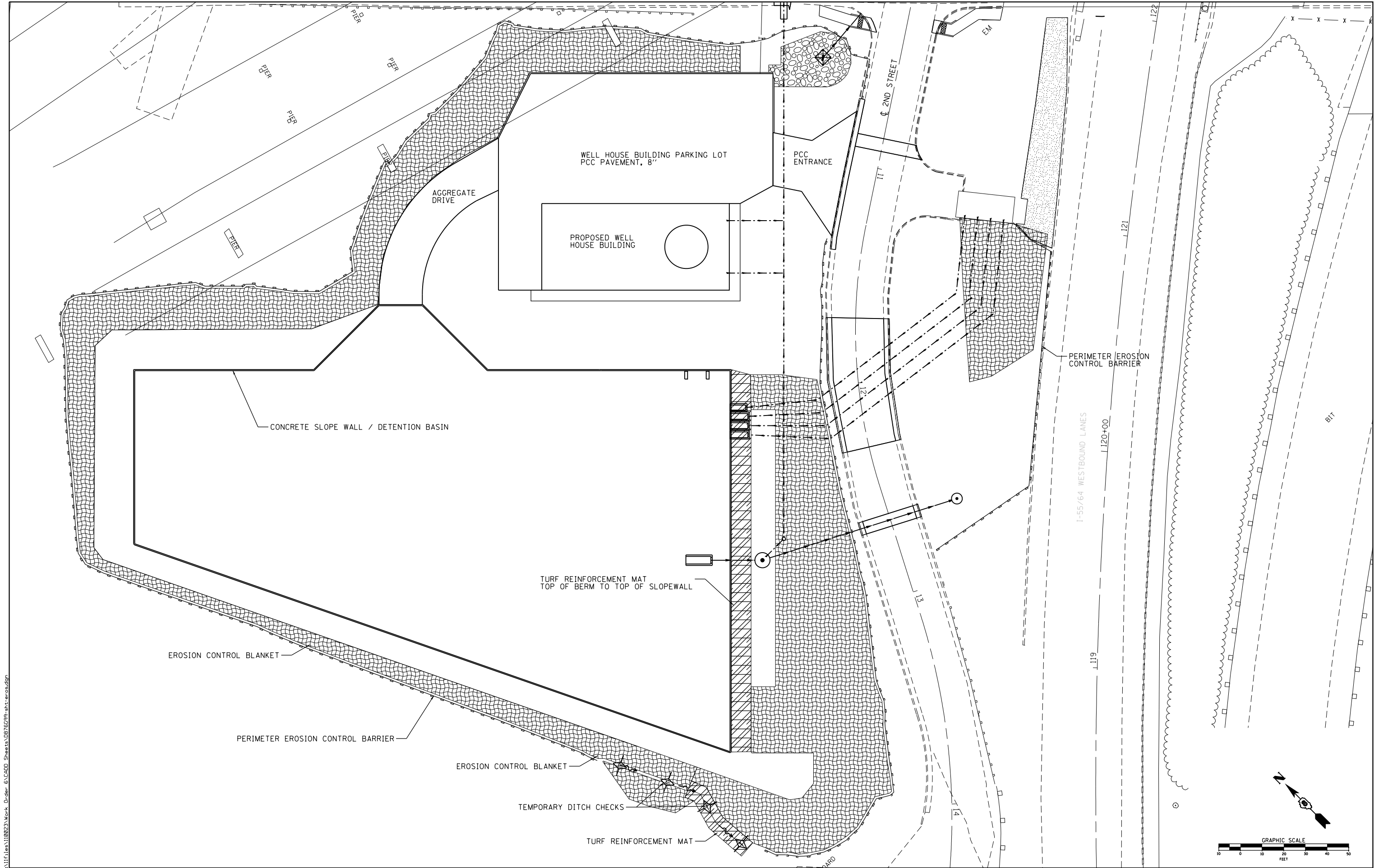


JOINT LEGEND
SEE HIGHWAY STANDARD B.L.R. 10-6 FOR JOINT DETAILS

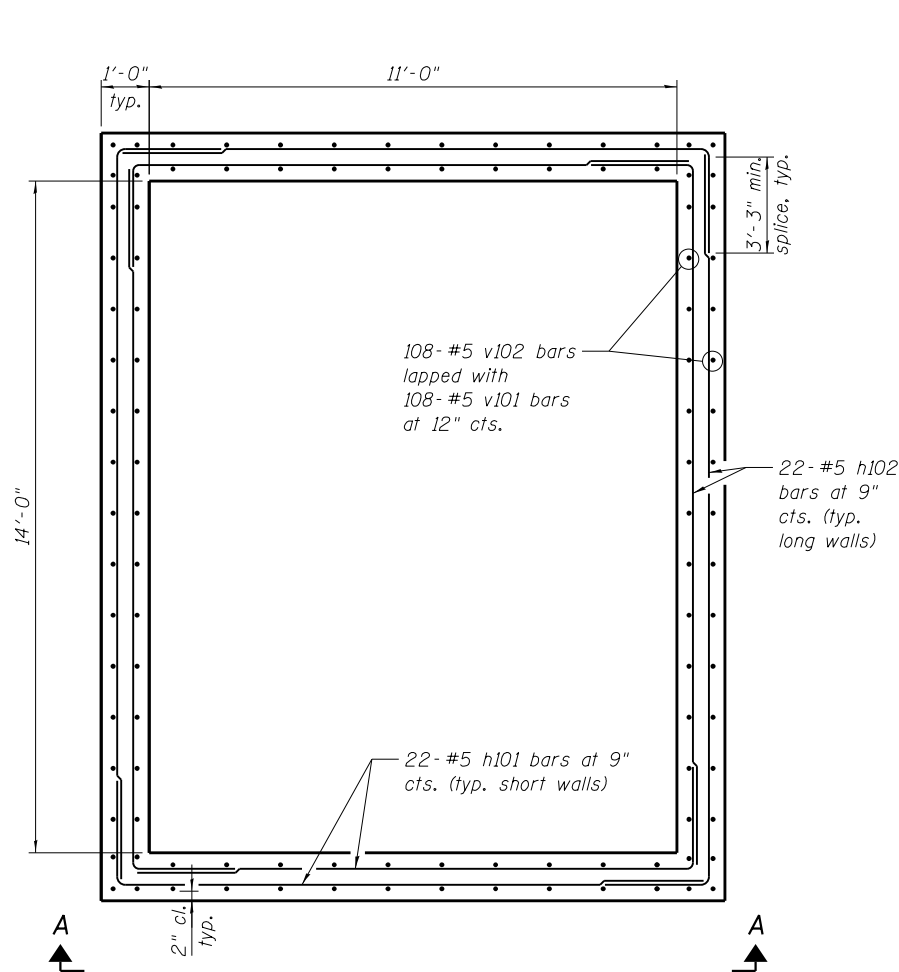
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- TYPE C TRANSVERSE JOINT
- TYPE E LONGITUDINAL JOINT



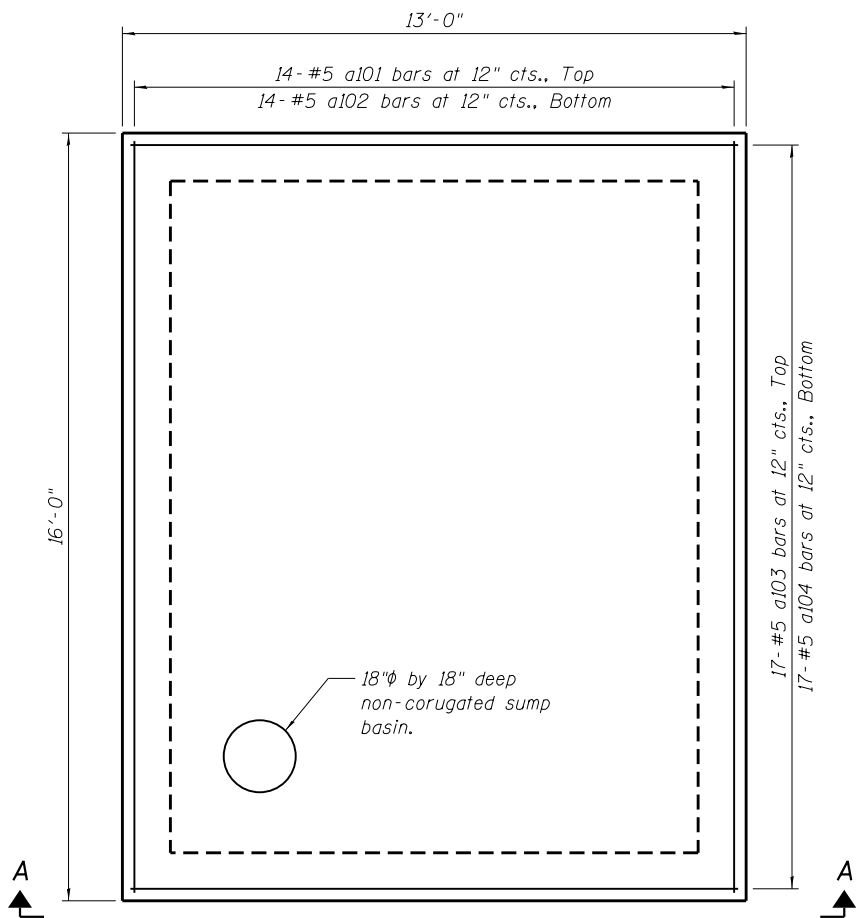
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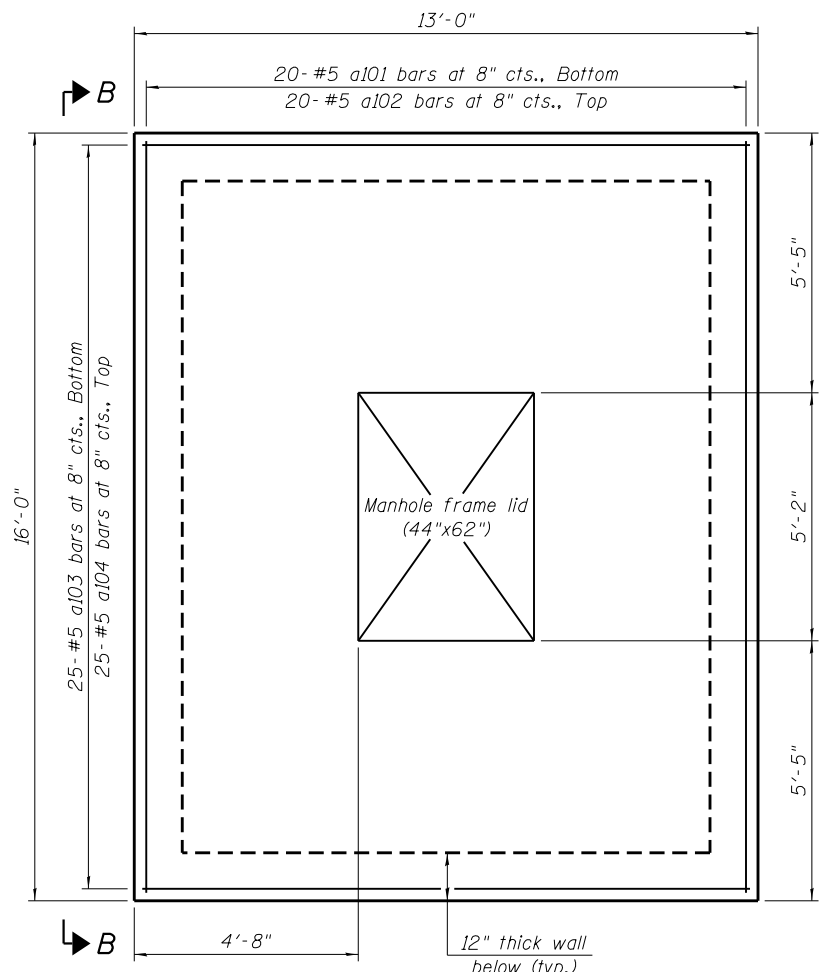
KLINGNER & ASSOCIATES, P.C. Engineers • Architects • Surveyors	USER NAME = bgj	DESIGNED - SEB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EROSION AND SEDIMENT CONTROL PLAN MISSOURI AVENUE DEEP WELL FACILITY		F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 40.0000' / in.	DRAWN - SEB	REVISED -				55/70/64	82-4T-1	ST. CLAIR	185	42
	PLOT DATE = 1/13/2015	CHECKED -	REVISED -				CONTRACT NO. 76099				
		DATE -	REVISED -				ILLINOIS FED. AID PROJECT				
SCALE: 1"=20'		SHEET 1 OF 1 SHEETS		STA.		TO STA.					



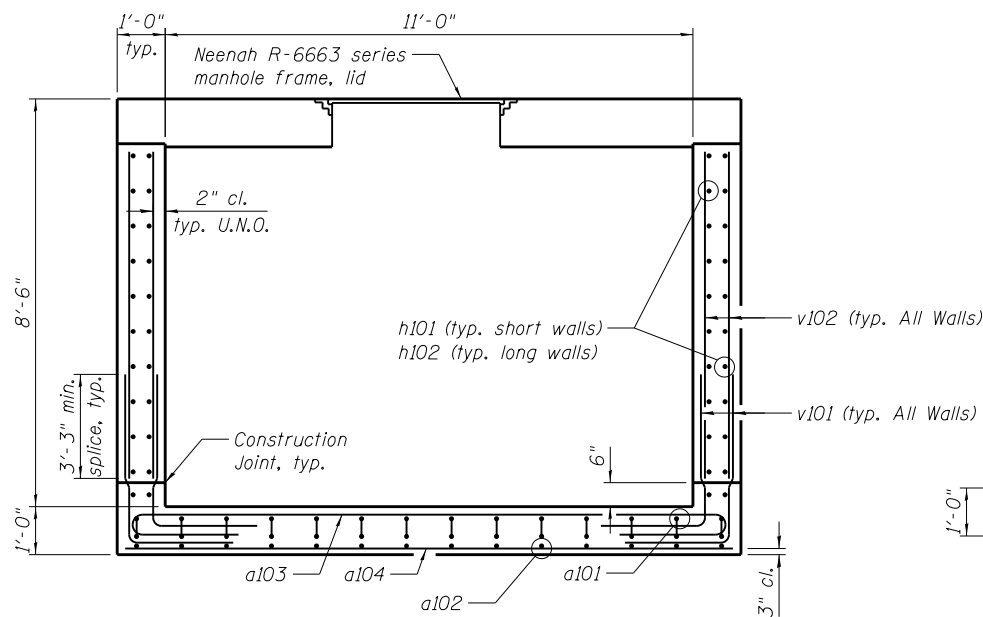
PLAN VIEW SHOWING WALL REINFORCEMENT



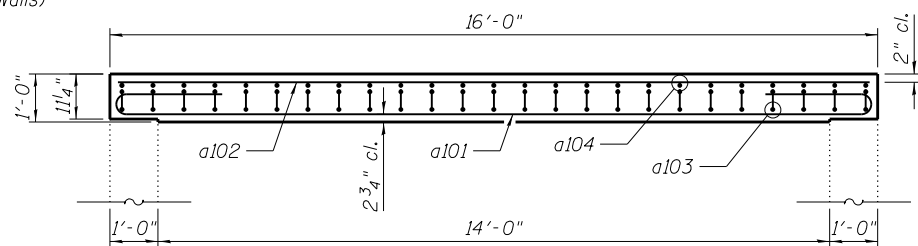
PLAN VIEW SHOWING FOOTING REINFORCEMENT



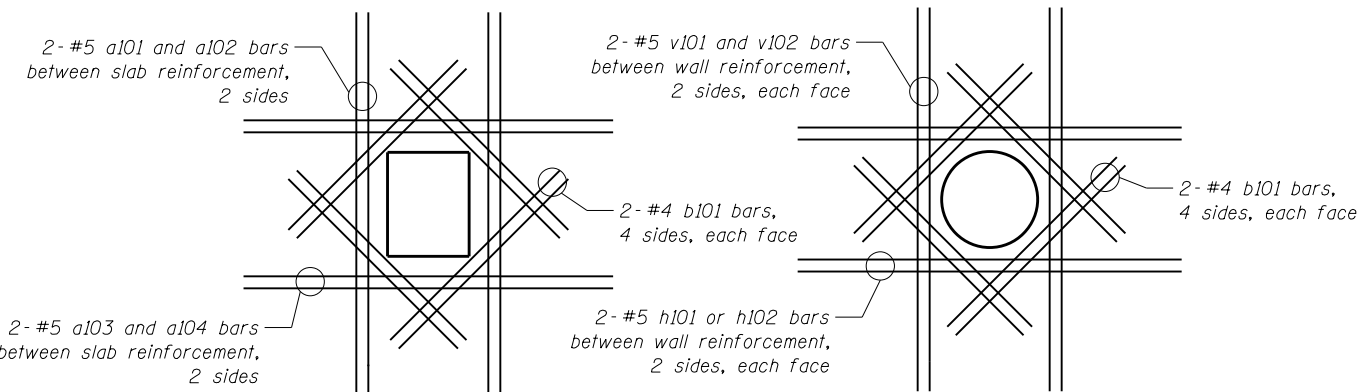
PLAN VIEW SHOWING TOP SLAB REINFORCEMENT



SECTION A-A



SECTION B-B



TYPICAL ADDITIONAL REINFORCEMENT AROUND MANHOLE FRAME LID

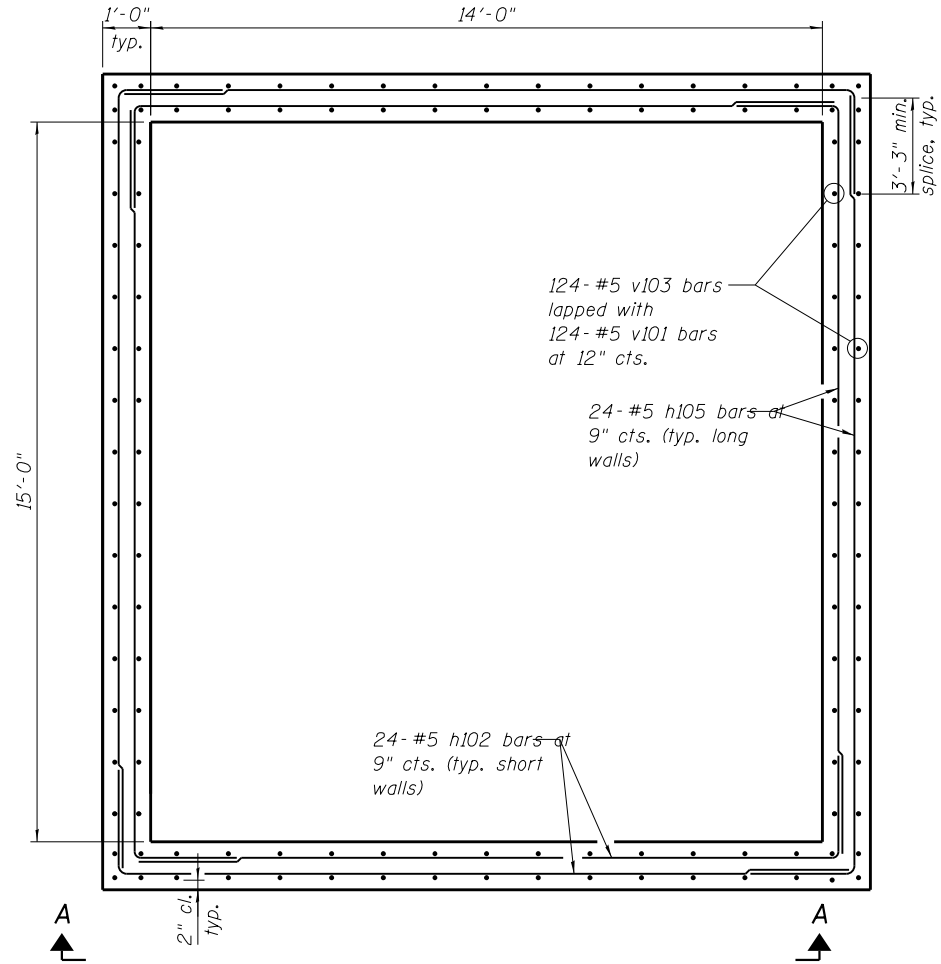
TYPICAL ADDITIONAL REINFORCEMENT AROUND PIPE PENETRATIONS

NOTES:
 All reinforcement to have 2" clear cover unless noted otherwise.
 Cost of sump pits included with Concrete Structures.
 $f'_c = 3,500$ psi
 $f_y = 60,000$ psi (Reinforcement)
 U.N.O. - Unless Noted Otherwise

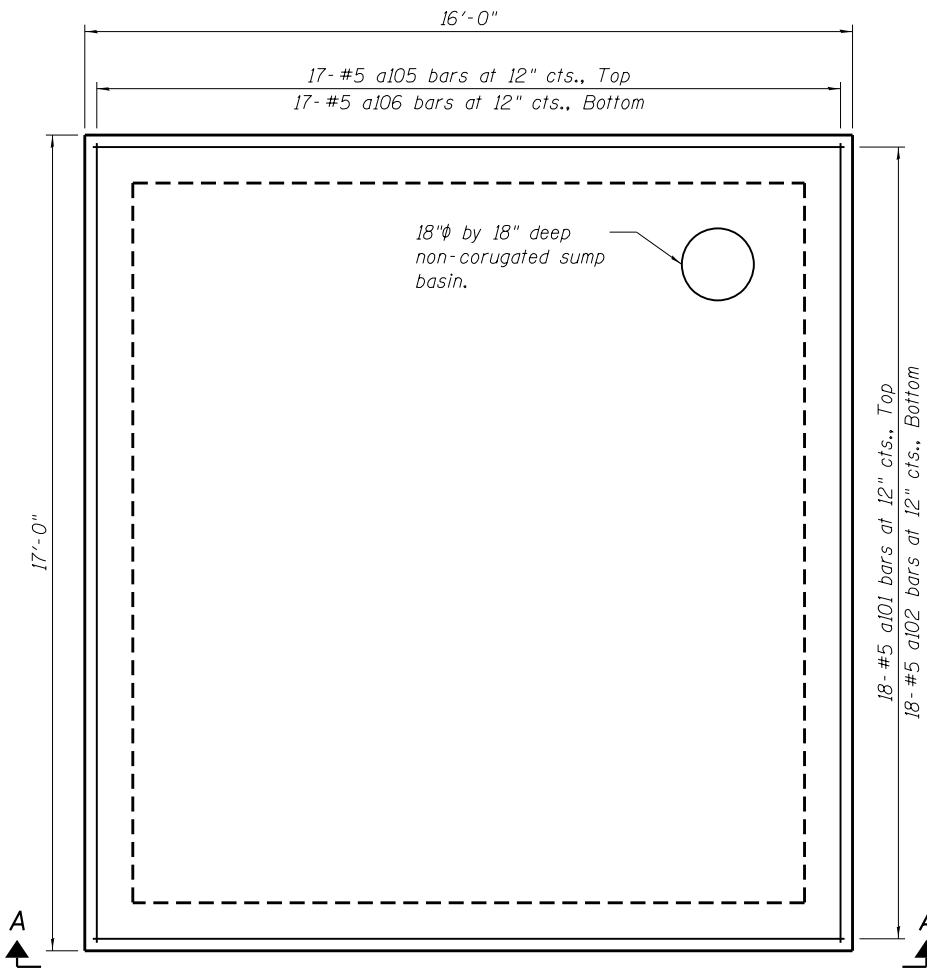
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		PLOT SCALE = 0:2,000 '1' / in.	CHECKED - LMS	REVISED -					55/70/64	82-4T-1	ST. CLAIR	185	43
		PLOT DATE = 1/13/2015	DATE - 08/22/2014	REVISED -		SCALE:		SHEET 01 OF 08 SHEETS	STA.	TO STA.	CONTRACT NO. 76C99		
											ILLINOIS FED. AID PROJECT		

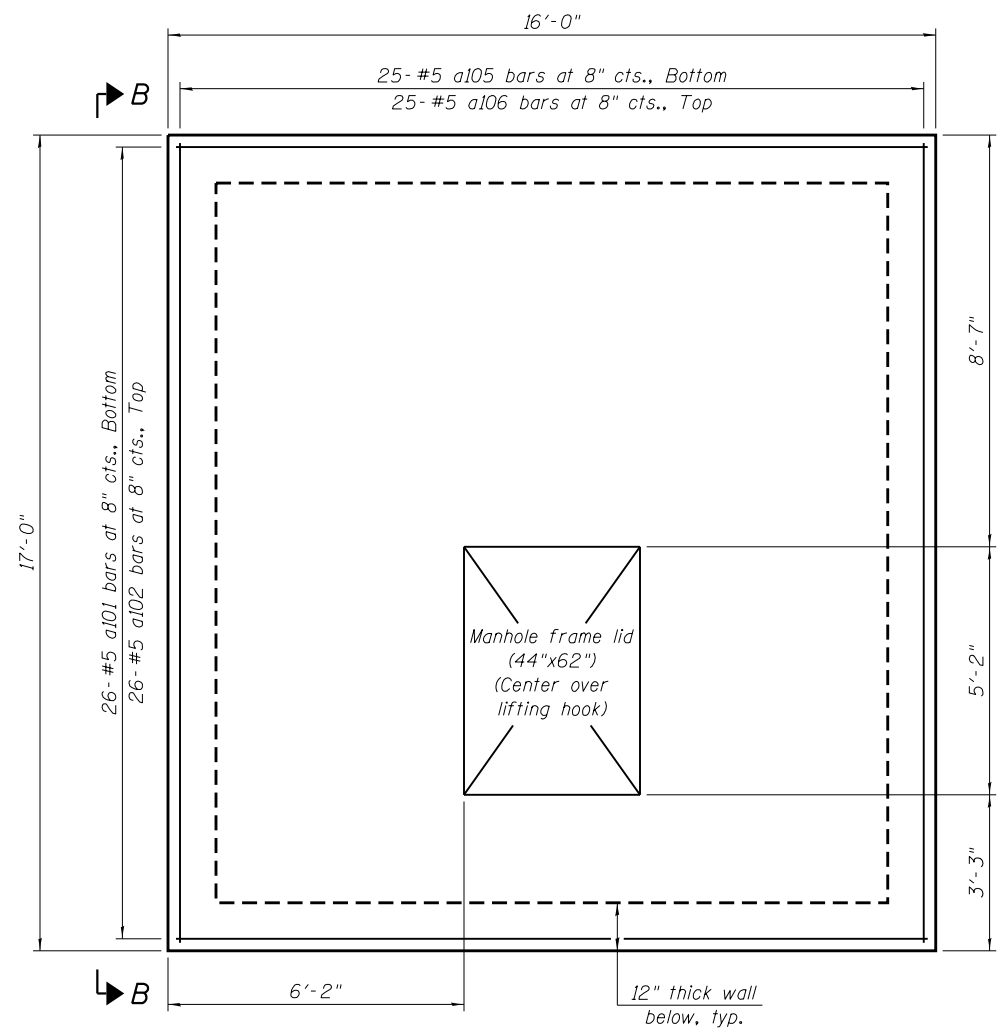
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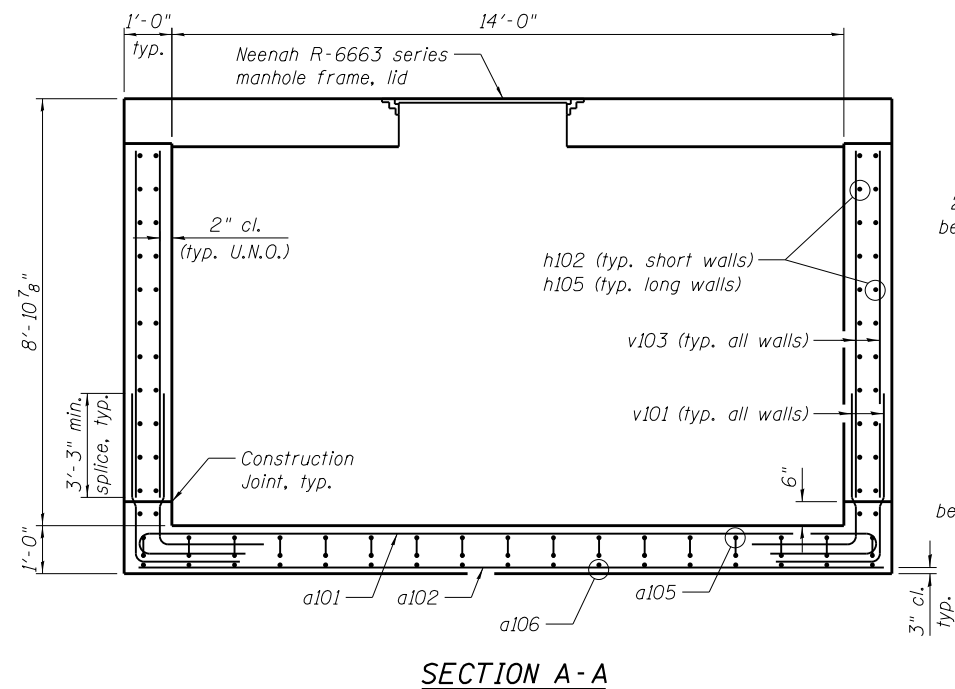
PLAN VIEW SHOWING WALL REINFORCEMENT



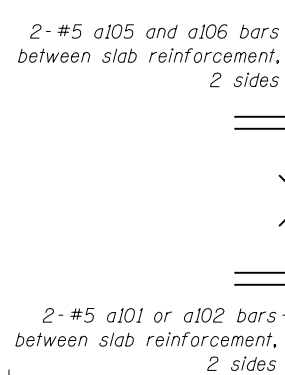
PLAN VIEW SHOWING FOOTING REINFORCEMENT



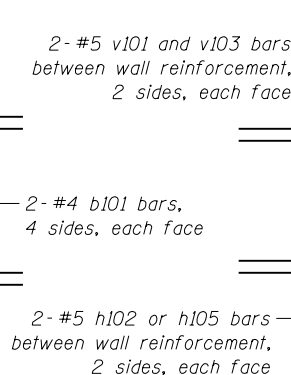
PLAN VIEW SHOWING TOP SLAB REINFORCEMENT



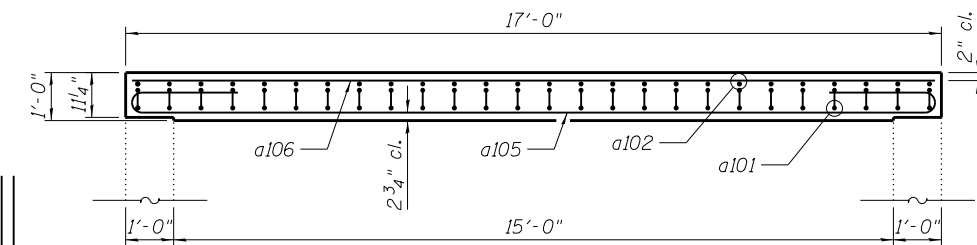
SECTION A-A



TYPICAL ADDITIONAL REINFORCEMENT AROUND MANHOLE FRAME LID



TYPICAL ADDITIONAL REINFORCEMENT AROUND PIPE PENETRATIONS



SECTION B-B

NOTES:

All reinforcement to have 2" clear cover unless noted otherwise.
Cost of sump pits included with Concrete Structures.

$f'_c = 3,500$ psi

$f_y = 60,000$ psi (Reinforcement)

U.N.O. - Unless Noted Otherwise



USER NAME = bgj	DESIGNED - RGB	REVISED -
	DRAWN - AJF	REVISED -
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PLOT DATE = 1/13/2015	DATE - 08/22/2014	REVISED -

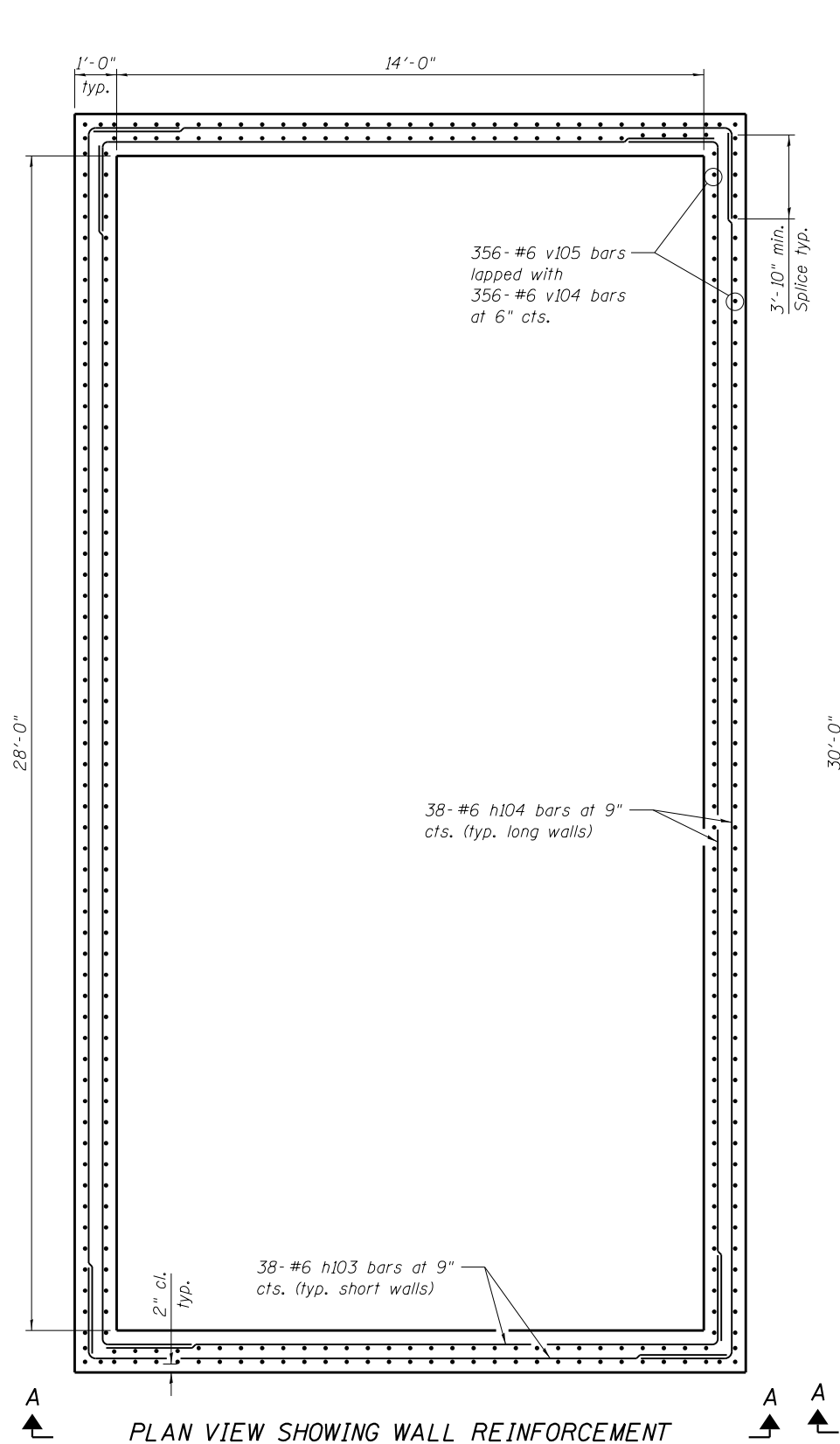
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FORCE MAIN VAULTS STRUCTURAL DETAILS - C2 15'x14'
MISSOURI AVENUE DEEP WELL FACILITY

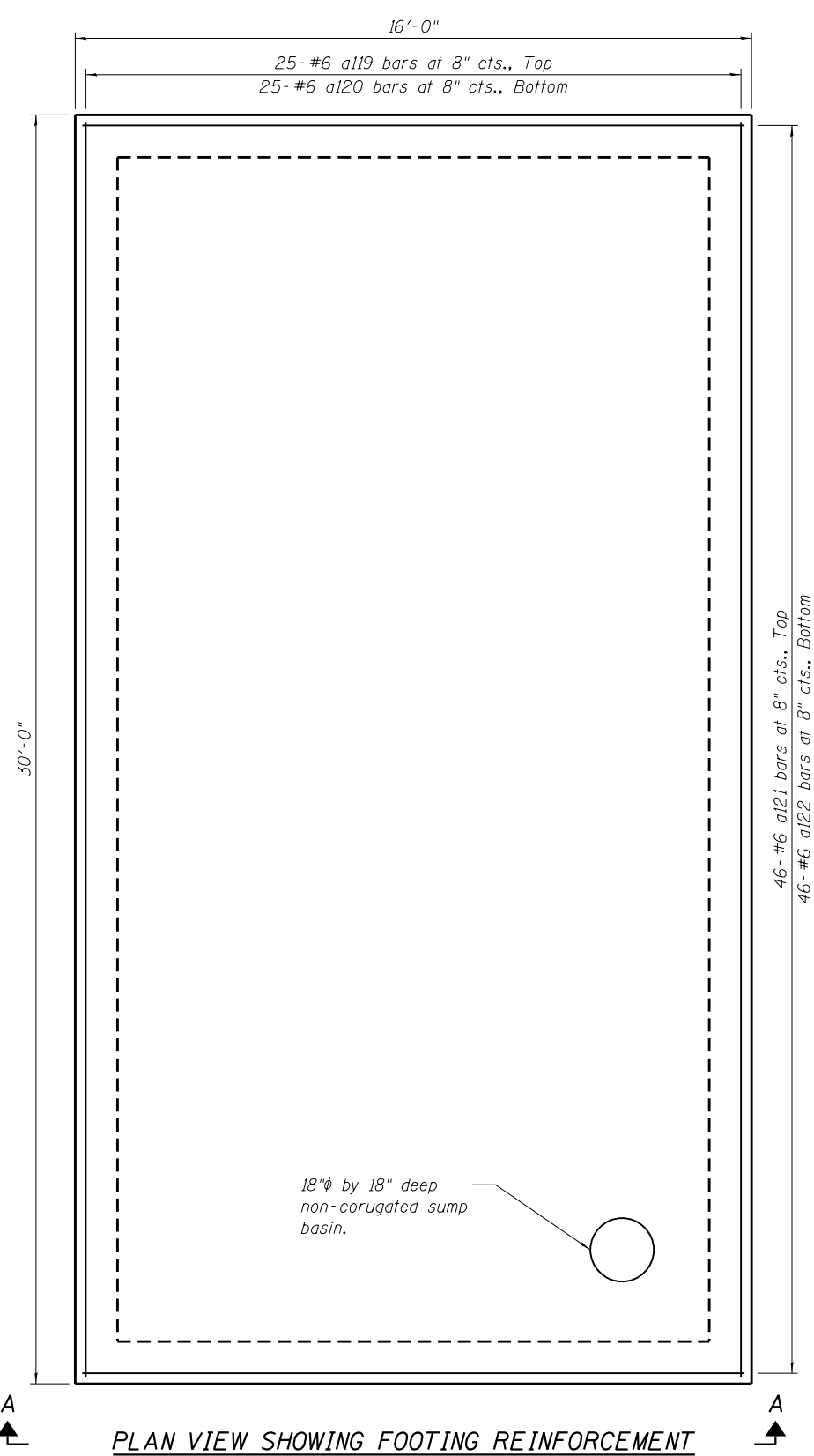
SCALE: SHEET 02 OF 08 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55/70/64	82-4T-1	ST. CLAIR	185	44
CONTRACT NO. 76C99				
ILLINOIS FED. AID PROJECT				

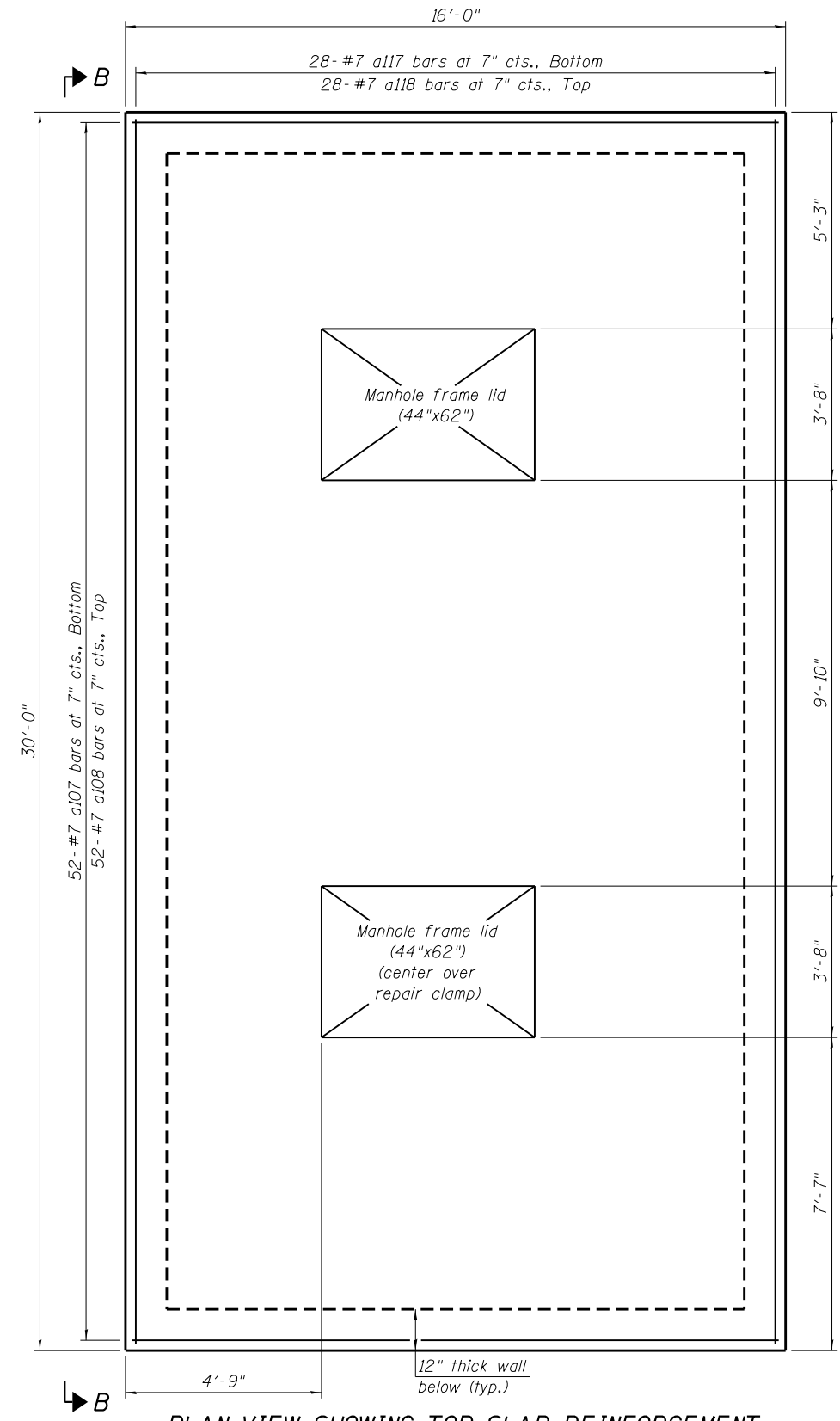
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PLAN VIEW SHOWING WALL REINFORCEMENT



PLAN VIEW SHOWING FOOTING REINFORCEMENT



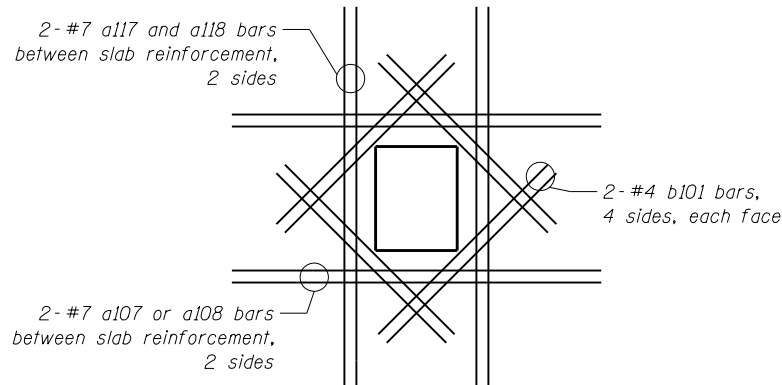
PLAN VIEW SHOWING TOP SLAB REINFORCEMENT

NOTES:

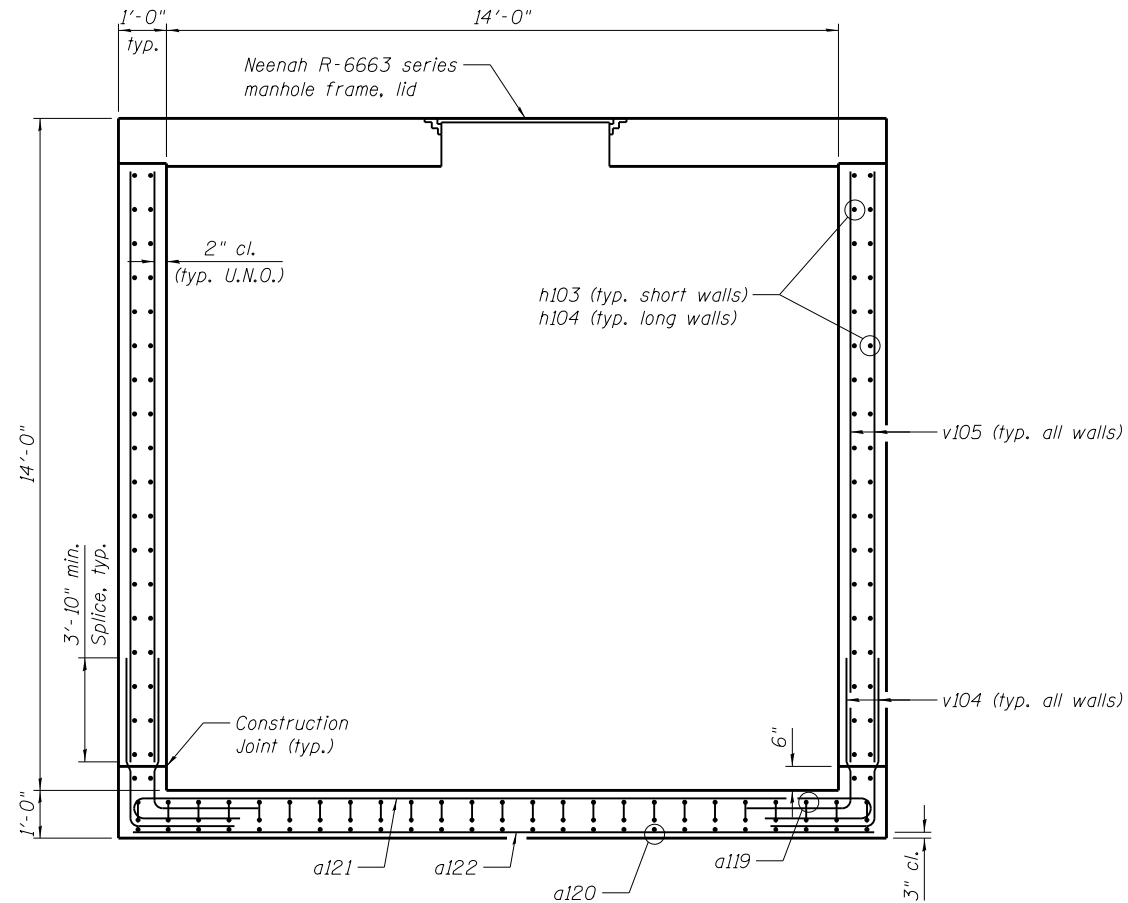
See sheet 2 of 2 for notes on this sheet.

LIN ENGINEERING, LTD. Consulting Engineers Springfield, Illinois	USER NAME = bgj	DESIGNED - RGB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	FORCE MAIN VAULTS STRUCTURAL DETAILS - C3 28'x14' MISSOURI AVENUE DEEP WELL FACILITY					F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 0:2.0000 '1' / in.	DRAWN - AJF	REVISED -		55/70/64	82-4T-1	ST. CLAIR	185	45					
	PLOT DATE = 1/13/2015	CHECKED - LMS	REVISED -		SCALE:			SHEET 03 OF 08 SHEETS			CONTRACT NO. 76099			
	DATE = 08/22/2014	REVISD -	REVISED -		STA. TO STA.			ILLINOIS FED. AID PROJECT						

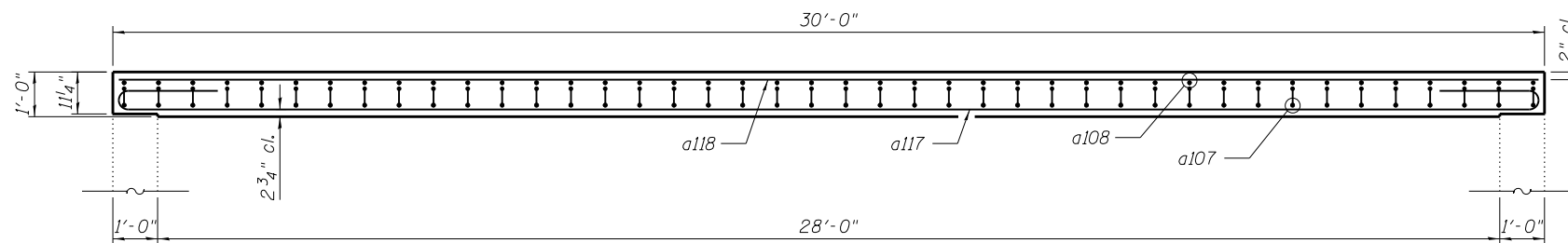
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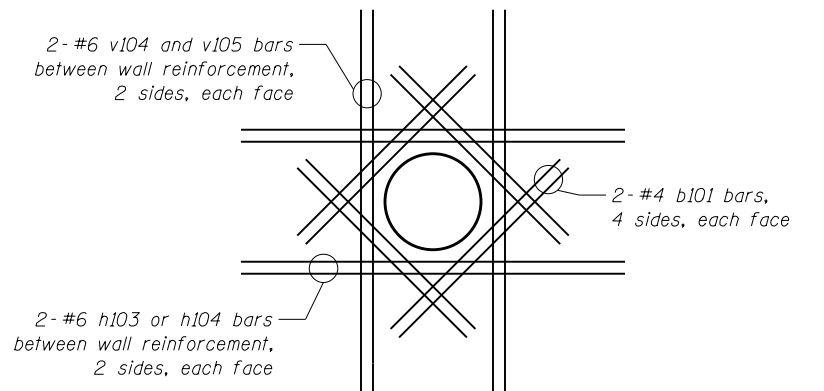
**TYPICAL ADDITIONAL
REINFORCEMENT AROUND
MANHOLE FRAME LID**



SECTION A-A



SECTION B-B



**TYPICAL ADDITIONAL
REINFORCEMENT AROUND PIPE
PENETRATIONS**

NOTES:

All reinforcement to have 2" clear cover unless noted otherwise.
Cost of sump pits included with Concrete Structures.

$f'_c = 3,500 \text{ psi}$

$f_y = 60,000 \text{ psi (Reinforcement)}$

U.N.O. - Unless Noted Otherwise



LIN ENGINEERING, LTD.
Consulting Engineers
Springfield, Illinois

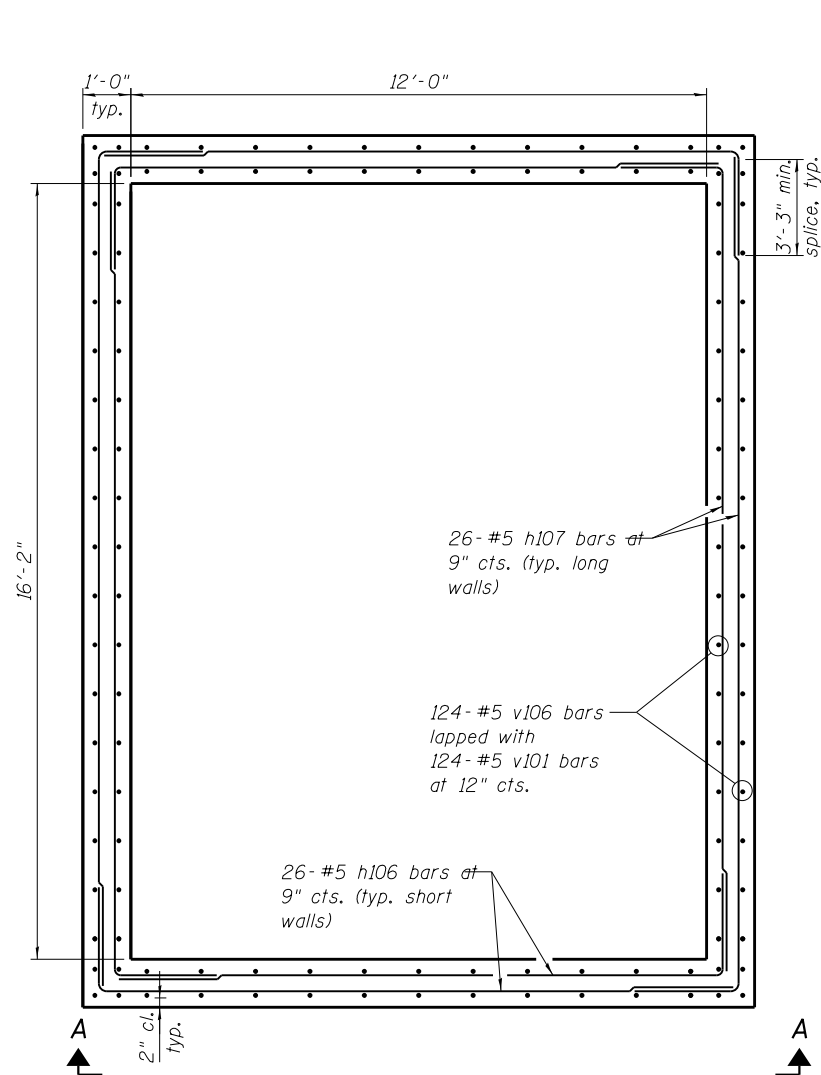
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PLOT DATE = 1/13/2015	DATE - 08/22/2014	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

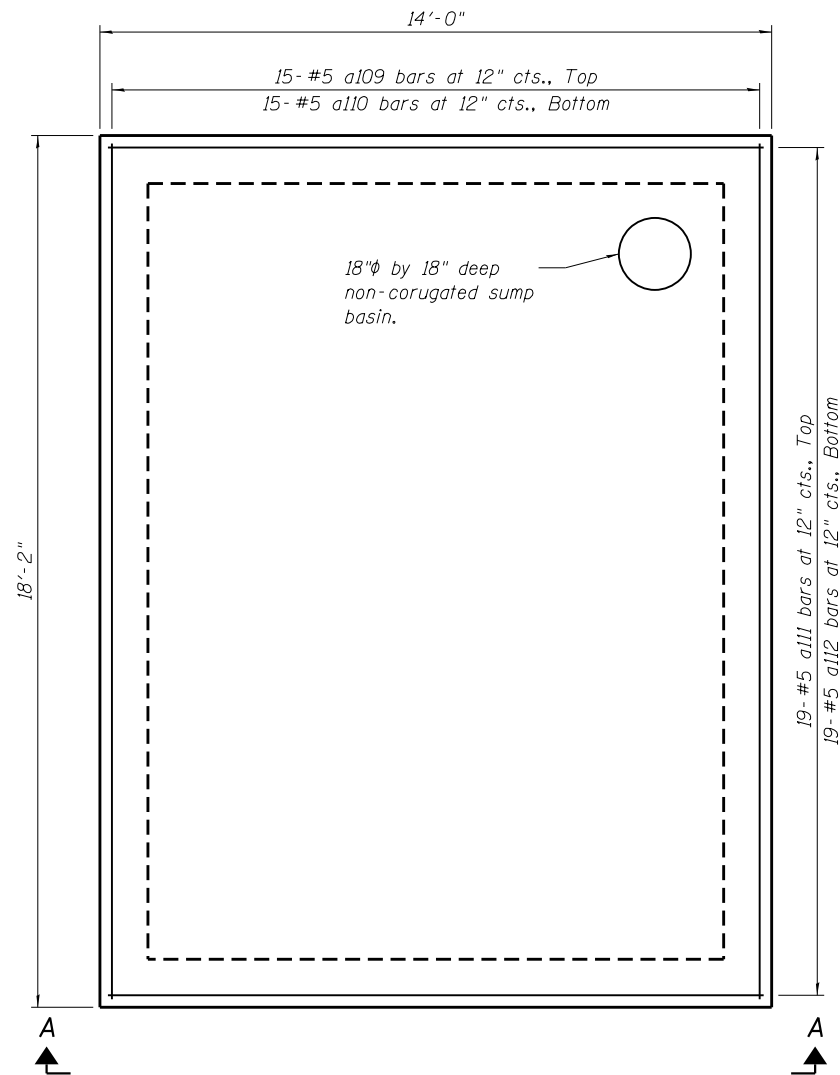
FORCE MAIN VAULTS STRUCTURAL DETAILS - C3 28'x14'
MISSOURI AVENUE DEEP WELL FACILITY

SCALE: SHEET 04 OF 08 SHEETS STA. TO STA.

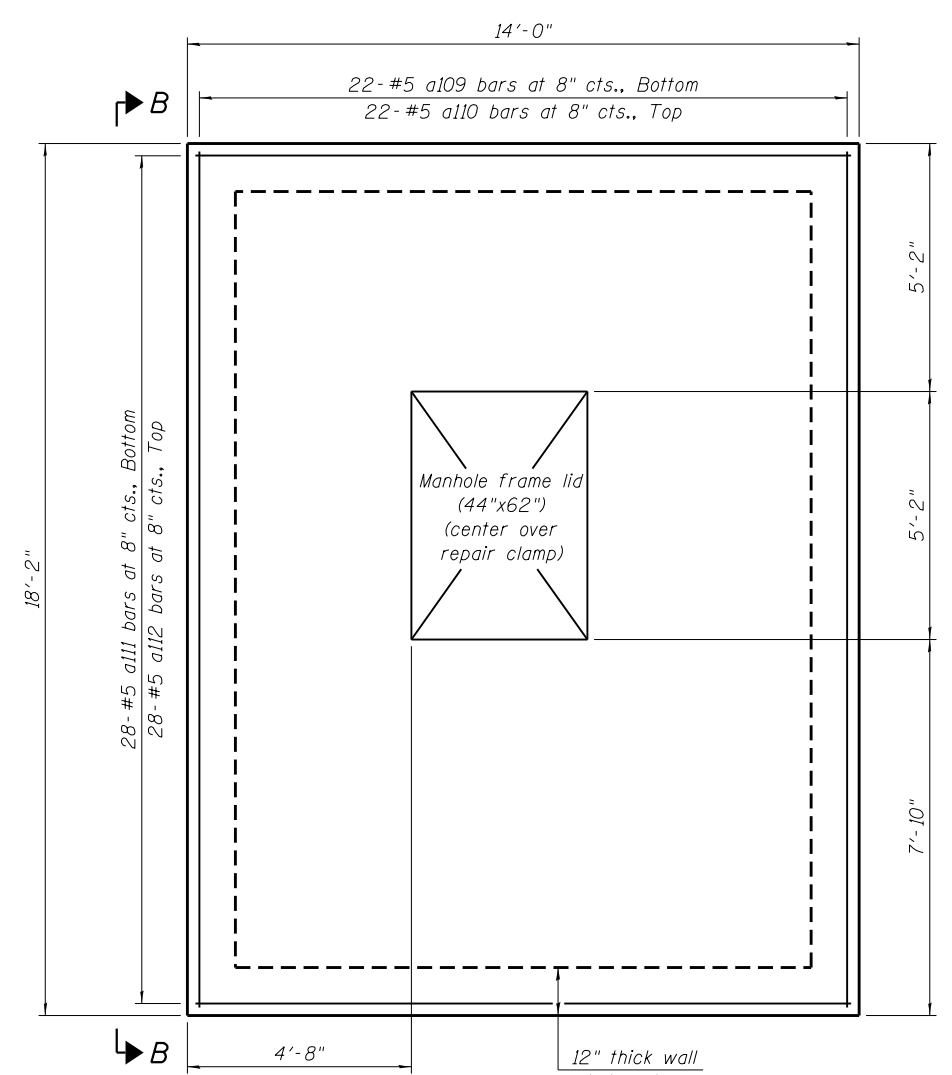
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55/70/64	82-4T-1	ST. CLAIR	185	46
CONTRACT NO. 76C99				
ILLINOIS FED. AID PROJECT				



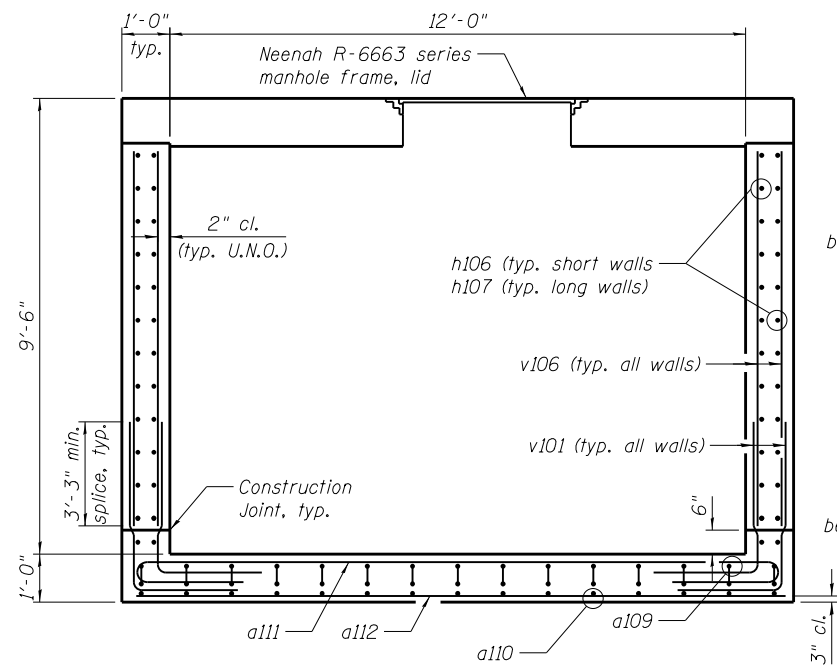
PLAN VIEW SHOWING WALL REINFORCEMENT



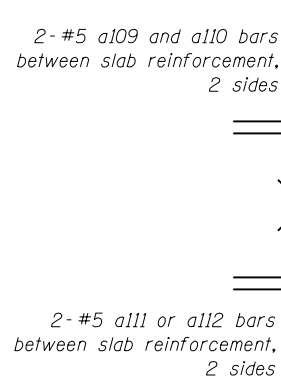
PLAN VIEW SHOWING FOOTING REINFORCEMENT



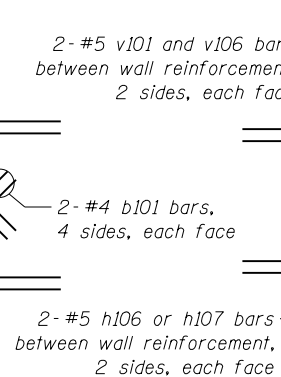
PLAN VIEW SHOWING TOP SLAB REINFORCEMENT



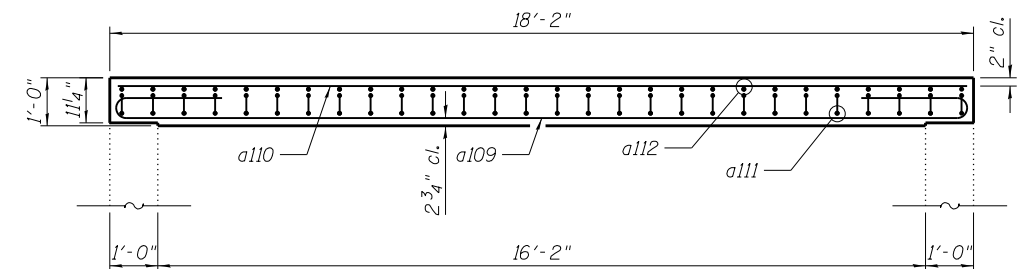
SECTION A-A



TYPICAL ADDITIONAL REINFORCEMENT AROUND MANHOLE FRAME LID



TYPICAL ADDITIONAL REINFORCEMENT AROUND PIPE PENETRATIONS



SECTION B-B

NOTES:

All reinforcement to have 2" clear cover unless noted otherwise.
Cost of sump pits included with Concrete Structures.

$f'_c = 3,500$ psi

$f_y = 60,000$ psi (Reinforcement)

U.N.O. - Unless Noted Otherwise

FILE NAME = Q:\11\Files\110023\Work Order - C4-C5 16'-2"x12' Sheets\1108-3.dgn



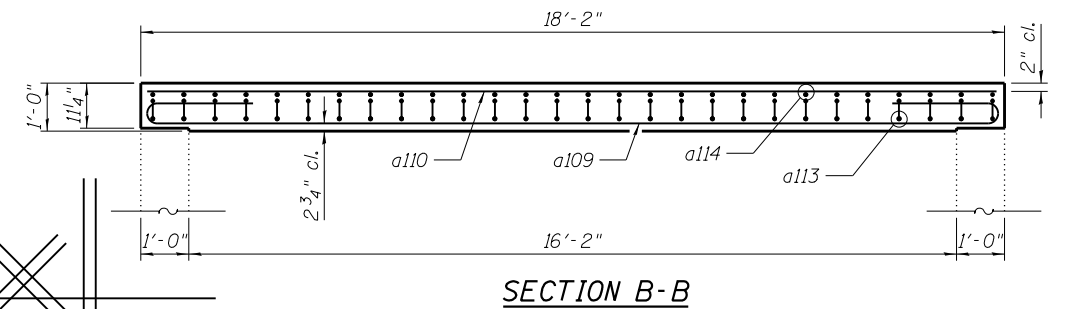
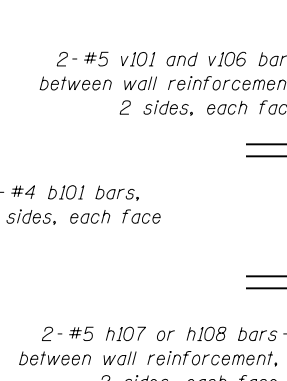
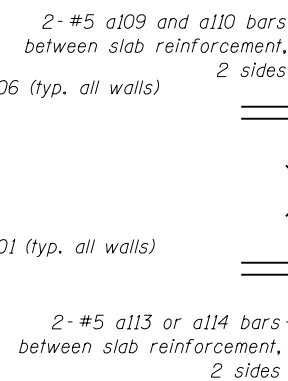
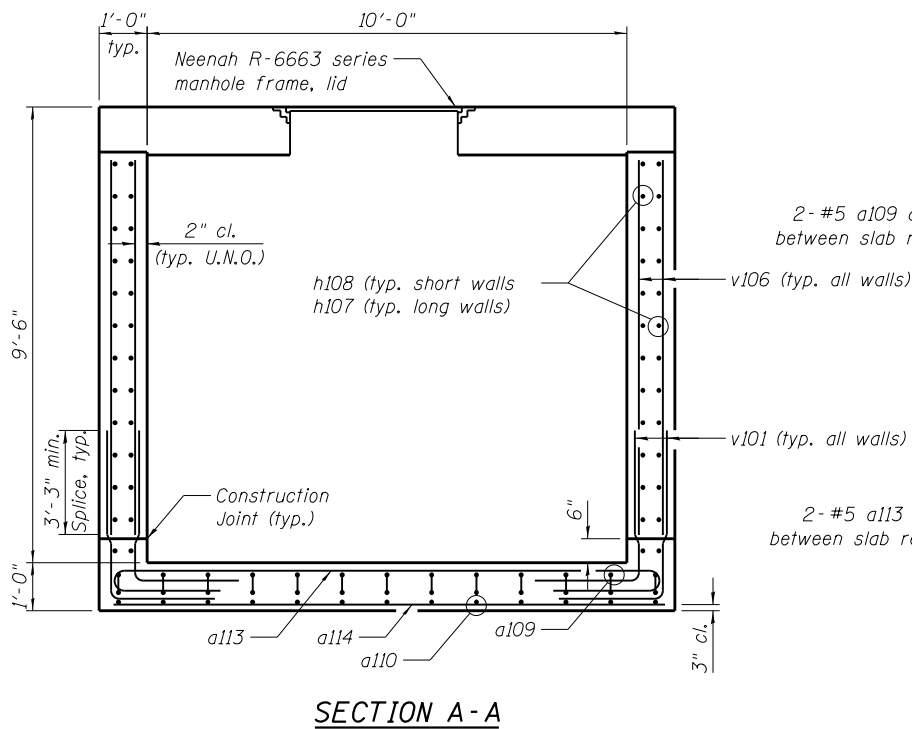
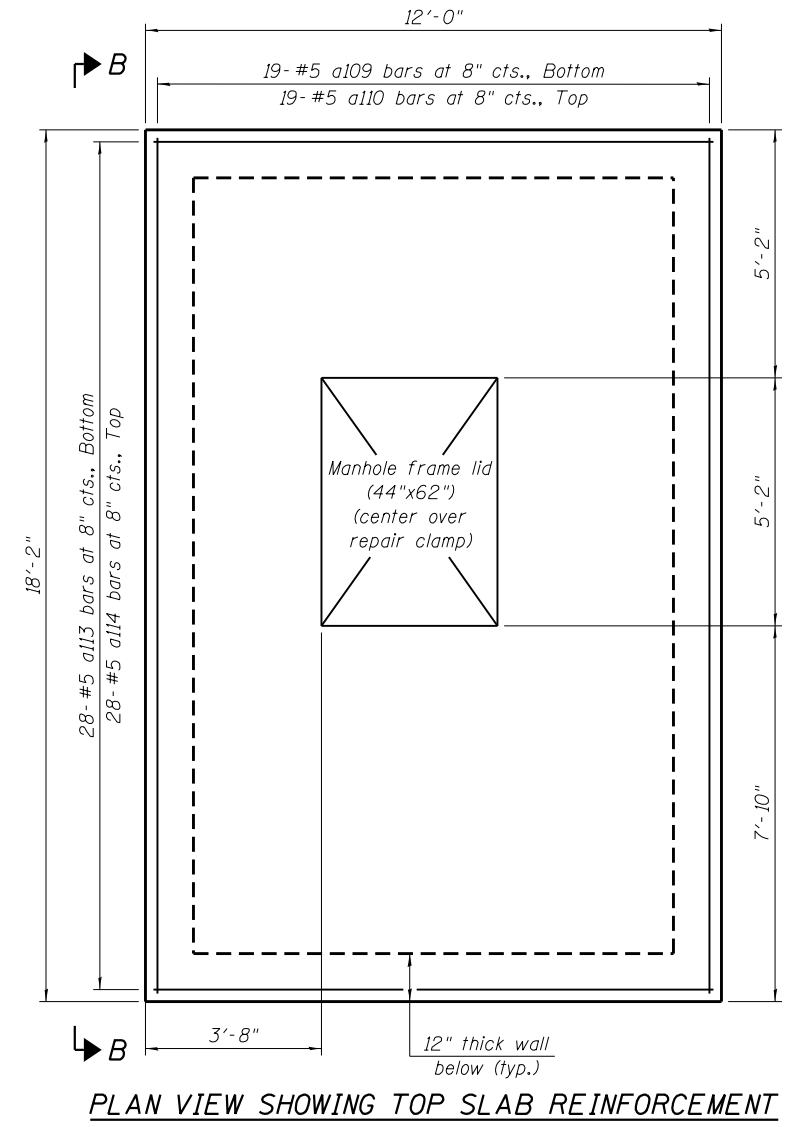
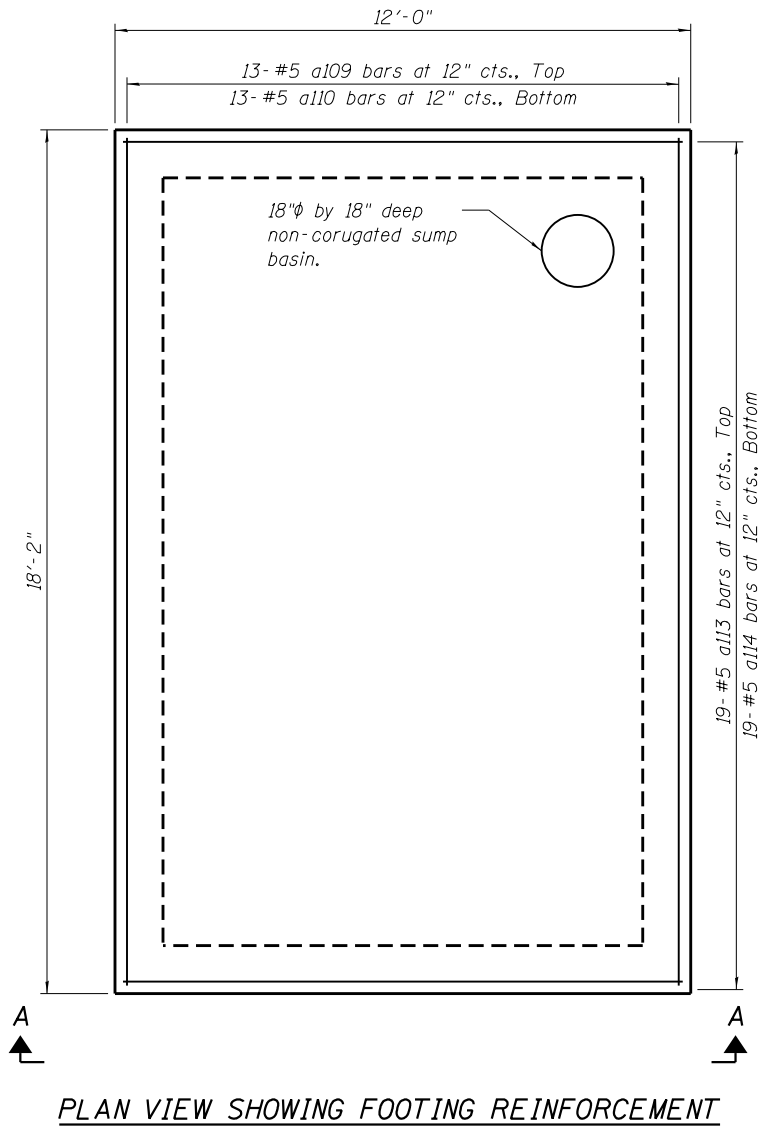
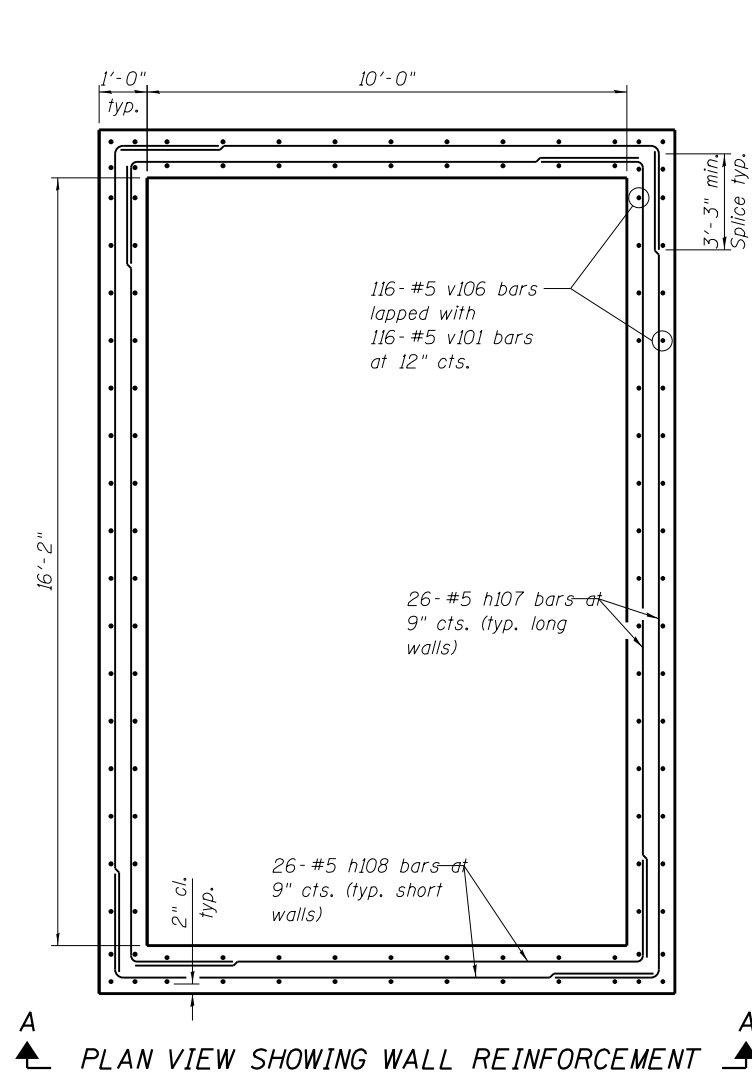
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DRAWN - AJF	REVIS	REVIS
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PLOT DATE = 1/13/2015	DATE - 08/22/2014	REVIS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FORCE MAIN VAULTS STRUCTURAL DETAILS - C4-C5 16'-2"x12'
MISSOURI AVENUE DEEP WELL FACILITY

SCALE: SHEET 05 OF 08 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55/70/64	82-4T-1	ST. CLAIR	185	47
CONTRACT NO. 76099				
ILLINOIS FED. AID PROJECT				



NOTES:

All reinforcement to have 2" clear cover unless noted otherwise.

Cost of sump pits included with Concrete Structures.

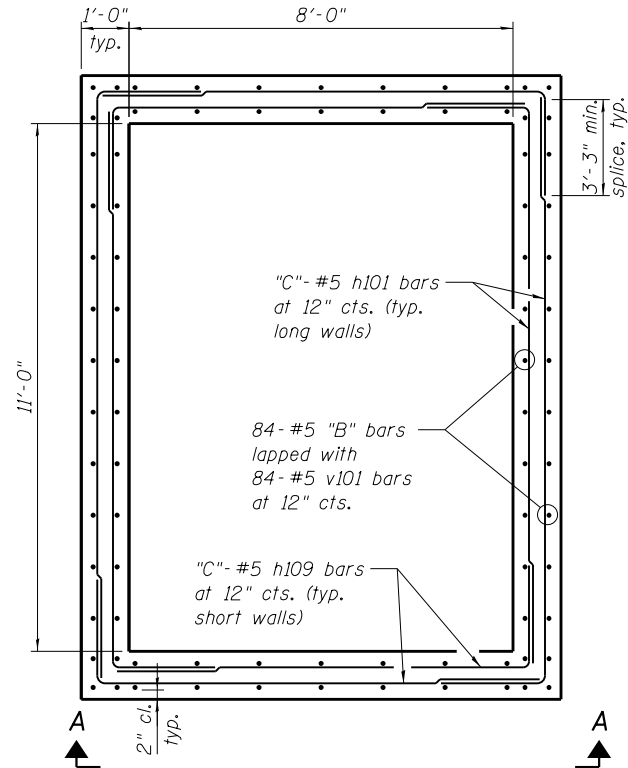
$f'_c = 3,500$ psi

$f_y = 60,000$ psi (Reinforcement)

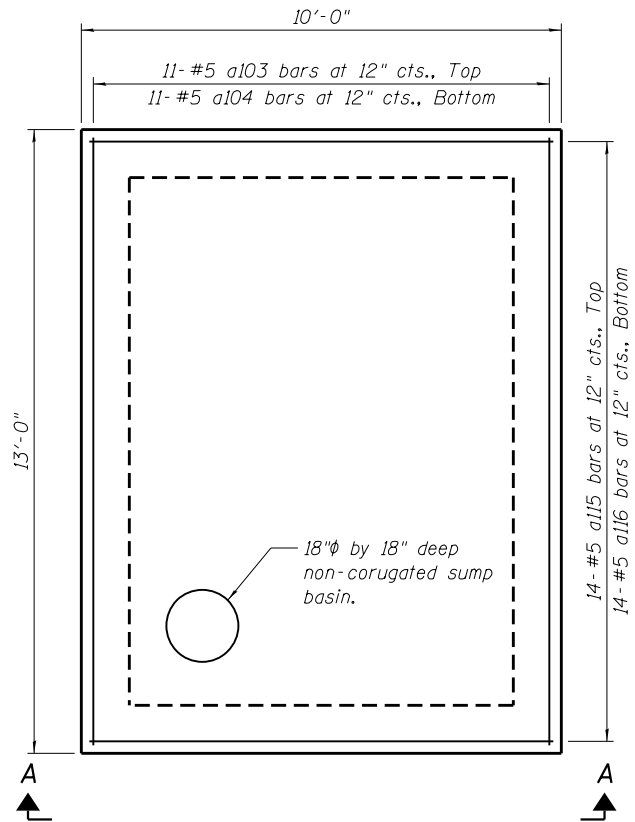
U.N.O. - Unless Noted Otherwise

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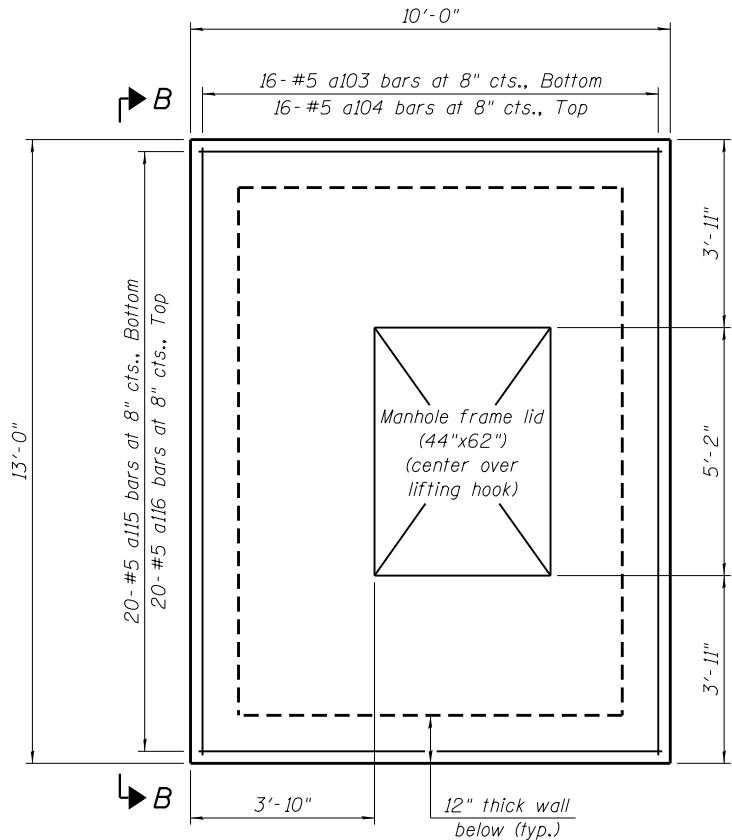
 LIN ENGINEERING, LTD. Consulting Engineers Springfield, Illinois	USER NAME = bgj	DESIGNED - RGB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	FORCE MAIN VAULTS STRUCTURAL DETAILS - C7 16'-2"x10' MISSOURI AVENUE DEEP WELL FACILITY				F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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	CHECKED - LMS	REVISD -	REVISED -		CONTRACT NO. 76C99								
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SCALE:		SHEET 06 OF 08 SHEETS		STA.		TO STA.							



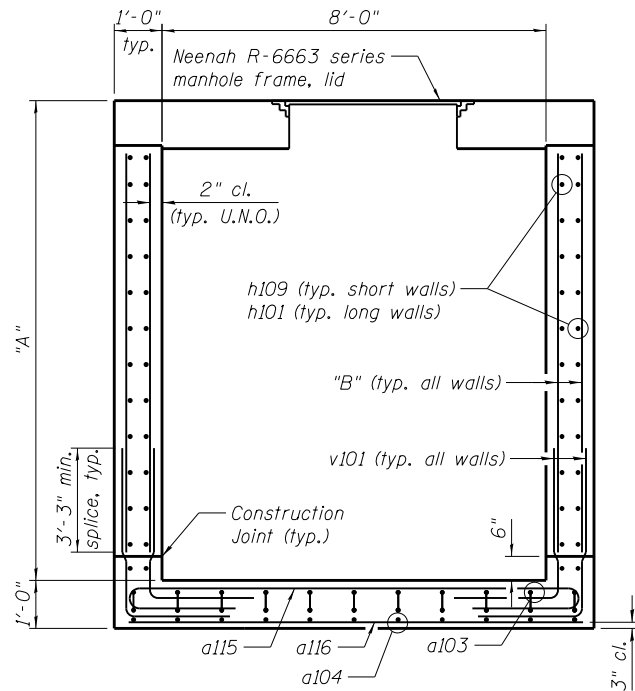
PLAN VIEW SHOWING WALL REINFORCEMENT



PLAN VIEW SHOWING FOOTING REINFORCEMENT



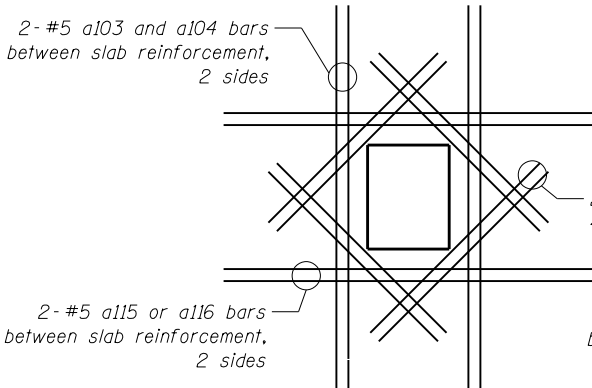
PLAN VIEW SHOWING TOP SLAB REINFORCEMENT



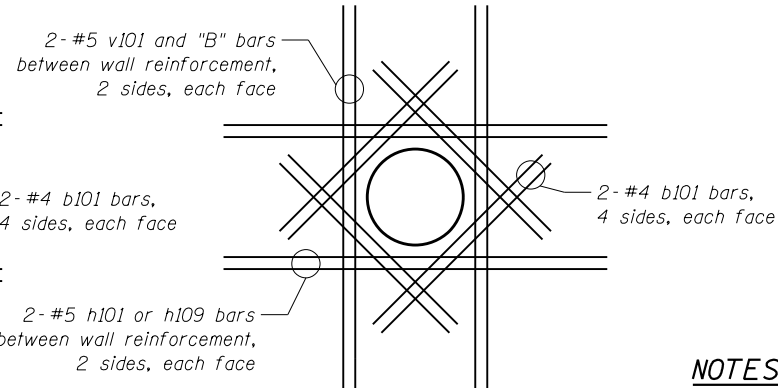
SECTION A-A

VARIABLES

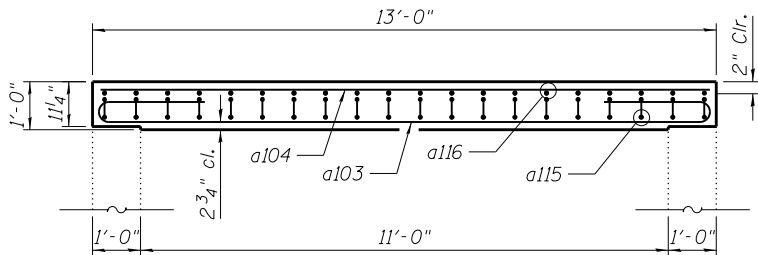
Vault	"A"	"B"	"C"
C6	12'-6"	v107	26
C8	10'-0"	v108	22
C9	7'-4 ³ / ₄ "	v109	16
C10	8'-8 ³ / ₈ "	v110	20
C11	13'-8 ³ / ₈ "	v111	30
C12	13'-9 ⁵ / ₈ "	v112	30
C13	7'-2 ³ / ₈ "	v113	16
C14	7'-4 ³ / ₄ "	v114	16
C15	7'-4 ³ / ₄ "	v115	16
C16	7'-2 ³ / ₈ "	v116	16
C17	8'-0"	v117	18
C18	8'-6"	v118	18



TYPICAL ADDITIONAL REINFORCEMENT AROUND MANHOLE FRAME LID



TYPICAL ADDITIONAL REINFORCEMENT AROUND PIPE PENETRATIONS



SECTION B-B

NOTES:

All reinforcement to have 2" clear cover unless noted otherwise.
Cost of sump pits included with Concrete Structures.

$f'_c = 3,500 \text{ psi}$

$f_y = 60,000 \text{ psi (Reinforcement)}$

U.N.O. - Unless Noted Otherwise

FILE NAME = Q:\11Files\110023\Work_Order_6\CA0D Sheets\1108-3.dgn

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C1 BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a101	38	#5	16'-10"	
a102	38	#5	15'-8"	
a103	46	#5	13'-10"	
a104	46	#5	12'-8"	
b101	64	#4	4'-0"	
h101	52	#5	15'-11"	
h102	60	#5	18'-11"	
v101	132	#5	7'-9"	
v102	132	#5	6'-10"	
Concrete Structures			Cu. Yd.	29.6
Reinforcement Bars			Pound	6,790

(For bar locations see sheet 01 of 8)

C2 BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a101	48	#5	16'-10"	
a102	48	#5	15'-8"	
a105	46	#5	17'-10"	
a106	46	#5	16'-8"	
b101	64	#4	4'-0"	
h102	64	#5	18'-11"	
h105	56	#5	19'-11"	
v101	148	#5	7'-9"	
v103	148	#5	7'-3"	
Concrete Structures			Cu. Yd.	37.5
Reinforcement Bars			Pound	8,200

(For bar locations see sheet 02 of 8)

C3 BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a107	58	#7	17'-4"	
a108	58	#7	15'-8"	
a117	32	#7	31'-4"	
a118	32	#7	29'-8"	
a119	25	#6	31'-0"	
a120	25	#6	29'-8"	
a121	46	#6	17'-0"	
a122	46	#6	15'-8"	
b101	80	#4	4'-0"	
h103	92	#6	19'-6"	
h104	84	#6	33'-6"	
v104	396	#6	8'-11"	
v105	396	#6	12'-4"	
Concrete Structures			Cu. Yd.	75.9
Reinforcement Bars			Pound	32,220

(For bar locations see sheet 03 and 04 of 8)

C4 BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a109	41	#5	19'-0"	
a110	41	#5	17'-10"	
a111	51	#5	14'-10"	
a112	51	#5	13'-8"	
b101	64	#4	4'-0"	
h106	68	#5	16'-11"	
h107	60	#5	21'-1"	
v101	148	#5	7'-9"	
v106	148	#5	7'-10"	
Concrete Structures			Cu. Yd.	37.1
Reinforcement Bars			Pound	8,190

(For bar locations see sheet 05 of 8)

C5 BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a109	41	#5	19'-0"	
a110	41	#5	17'-10"	
a111	51	#5	14'-10"	
a112	51	#5	13'-8"	
b101	64	#4	4'-0"	
h106	68	#5	16'-11"	
h107	60	#5	21'-1"	
v101	148	#5	7'-9"	
v106	148	#5	7'-10"	
Concrete Structures			Cu. Yd.	37.1
Reinforcement Bars			Pound	8,190

(For bar locations see sheet 05 of 8)

C6 BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a103	31	#5	13'-10"	
a104	31	#5	12'-8"	
a115	38	#5	10'-10"	
a116	38	#5	9'-8"	
b101	48	#4	4'-0"	
h101	52	#5	15'-11"	
h109	68	#5	12'-11"	
v101	100	#5	7'-9"	
v107	100	#5	10'-10"	
Concrete Structures			Cu. Yd.	26.8
Reinforcement Bars			Pound	5,520

(For bar locations see sheet 07 of 8)

C7 BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a109	36	#5	19'-0"	
a110	36	#5	17'-10"	
a113	51	#5	12'-10"	
a114	51	#5	11'-8"	
b101	64	#4	4'-0"	
h107	60	#5	21'-1"	
h108	68	#5	14'-11"	
v101	140	#5	7'-9"	
v106	140	#5	7'-10"	
Concrete Structures			Cu. Yd.	33.1
Reinforcement Bars			Pound	7,520

(For bar locations see sheet 06 of 8)

C8 BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a103	31	#5	13'-10"	
a104	31	#5	12'-8"	
a115	38	#5	10'-10"	
a116	38	#5	9'-8"	
b101	48	#4	4'-0"	
h101	44	#5	15'-11"	
h109	60	#5	12'-11"	
v101	100	#5	7'-9"	
v108	100	#5	8'-4"	
Concrete Structures			Cu. Yd.	22.7
Reinforcement Bars			Pound	5,020

(For bar locations see sheet 07 of 8)

C9 BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a103	31	#5	13'-10"	
a104	31	#5	12'-8"	
a115	38	#5	10'-10"	
a116	38	#5	9'-8"	
b101	48	#4	4'-0"	
h101	32	#5	15'-11"	
h109	48	#5	12'-11"	
v101	100	#5	7'-9"	
v109	100	#5	5'-9"	
Concrete Structures			Cu. Yd.	18.7
Reinforcement Bars			Pound	4,390

(For bar locations see sheet 07 of 8)

C10 BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a103	31	#5	13'-10"	
a104	31	#5	12'-8"	
a115	38	#5	10'-10"	
a116	38	#5	9'-8"	
b101	48	#4	4'-0"	
h101	40	#5	15'-11"	
h109	56	#5	12'-11"	
v101	100	#5	7'-9"	
v110	100	#5	7'-1"	
Concrete Structures			Cu. Yd.	20.7
Reinforcement Bars			Pound	4,770

(For bar locations see sheet 07 of 8)

C11 BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a103	31	#5	13'-10"	
a104	31	#5	12'-8"	
a115	38	#5	10'-10"	
a116	38	#5	9'-8"	
b101	48	#4	4'-0"	
h101	60	#5	15'-11"	
h109	76	#5	12'-11"	
v101	100	#5	7'-9"	
v111	100	#5	12'-1"	
Concrete Structures			Cu. Yd.	28.5
Reinforcement Bars			Pound	5,890

(For bar locations see sheet 07 of 8)

C12 BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a103	31	#5	13'-10"	
a104	31	#5	12'-8"	
a115	38	#5	10'-10"	
a116	38	#5	9'-8"	
b101	48	#4	4'-0"	
h101	60	#5	15'-11"	
h109	76	#5	12'-11"	
v101	100	#5	7'-9"	
v112	100	#5	12'-2"	
Concrete Structures			Cu. Yd.	28.7
Reinforcement Bars			Pound	5,900

(For bar locations see sheet 07 of 8)

C13 BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a103	31	#5	13'-10"	
a104	31	#5	12'-8"	
a115	38	#5	10'-10"	
a116	38	#5	9'-8"	
b101	48	#4	4'-0"	
h101	32	#5	15'-11"	
h109	48	#5	12'-11"	
v101	100	#5	7'-9"	
v113	100	#5	5'-7"	
Concrete Structures			Cu. Yd.	18.4
Reinforcement Bars			Pound	4,370

(For bar locations see sheet 07 of 8)

C14 BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a103	31	#5	13'-10"	
a104	31	#5	12'-8"	
a115	38	#5	10'-10"	
a116	38	#5	9'-8"	
b101	48	#4	4'-0"	
h101	32	#5	15'-11"	
h109	48	#5	12'-11"	
v101	100	#5	7'-9"	
v114	100	#5	5'-9"	
Concrete Structures			Cu. Yd.	18.7
Reinforcement Bars			Pound	4,390

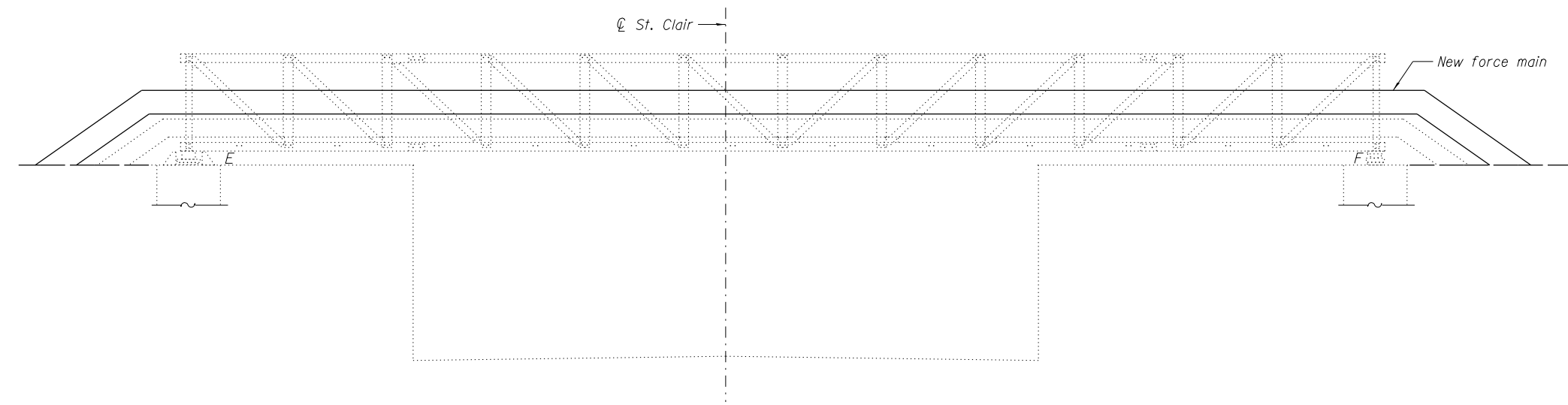
(For bar locations see sheet 07 of 8)

C15 BILL OF MATERIAL

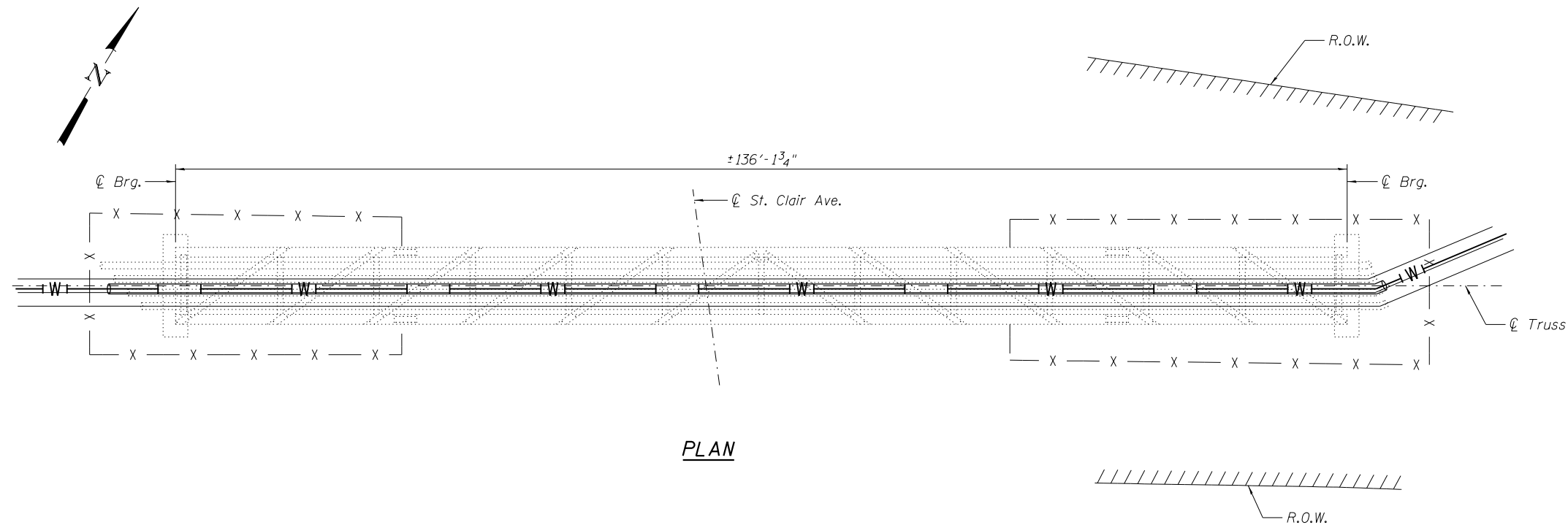
Bar	No.	Size	Length	Shape
a103	31	#5	13'-10"	
a104	31	#5	12'-8"	
a115	38	#5	10'-10"	

Benchmark:

Existing Structure: The existing structure is a truss bridge carrying 3-12" ϕ force main crossing over St. Clair Ave. The trusses are spaced apart at 6'-6" c.c. in a square configuration. Each truss has 12 equal bays for a total distance of $\pm 136'-1\frac{3}{4}"$ c.c. of bearings. Pratt-type Single-Diagonal bracing system was used.



ELEVATION



PLAN

GENERAL NOTES

Fasteners shall be ASTM A325 Type 1, mechanically galvanized bolts. Bolts $\frac{3}{4}"$ in. ϕ , holes $\frac{13}{16}"$ in. ϕ , unless otherwise noted.

All new fasteners shall be high strength bolts. Holes shall be subpunched or subdrilled $\frac{1}{16}"$ dia. and reamed in the field to $\frac{13}{16}"$ dia. for $\frac{3}{4}"$ dia. bolts, unless otherwise noted. Holes shall be subpunched or subdrilled $\frac{13}{16}"$ dia. and reamed in the field to $\frac{15}{16}"$ dia. for $\frac{7}{8}"$ dia. bolts, unless otherwise noted.

No field welding is permitted except as specified in the contract documents.

Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

Existing structural steel shall only be cleaned and painted as required by the Special Provision "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".

All new structural steel shall be shop painted with inorganic zinc rich primer per AASHTO M300, Type I.

The Contractor shall take precautions to safeguard the existing water main from additional truss deflections during the installation of the new force main. A detailed procedure of installation shall be submitted to the Engineer for approval prior to construction.

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Furnishing and Erecting Structural Steel	Pounds	5,910

DESIGN SPECIFICATIONS

2012 AASHTO LRFD Bridge Design Specifications, 6th Edition with 2013 Interim Revisions

2009 LRFD Guide Specifications for the Design of Pedestrian Bridges

2002 AASHTO Standard Specifications for Highway Bridges and

FHWA Seismic Retrofitting Manual for Highway Bridges 1995 for Seismic Design Criteria only.

DESIGN STRESSES

EXISTING CONSTRUCTION

$f_c' = 3,500$ psi

$f_y = 60,000$ psi (Reinforcement)

$f_y = 36,000$ (M270 Grade 36)

NEW CONSTRUCTION

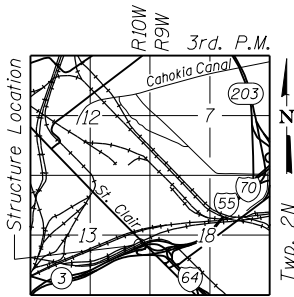
$f_y = 36,000$ psi (M270 Grade 36)

SEISMIC DATA

Seismic Performance Category (SPC) = A

Horizontal Bedrock Acceleration Coefficient = 0.085

Site Coefficient (S) = 2.0

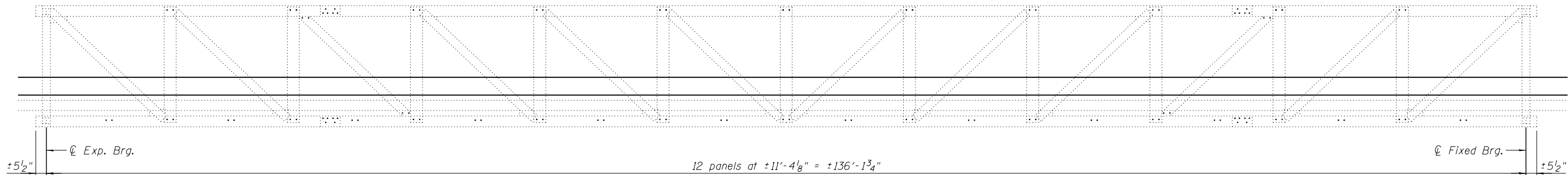


LOCATION SKETCH

GENERAL PLAN & ELEVATION
PIPE BRIDGE OVER ST. CLAIR AVE.
MADISON COUNTY

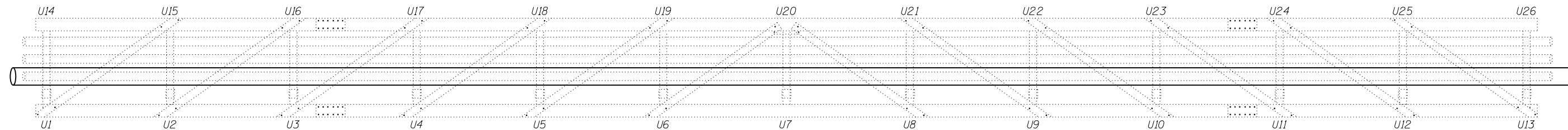
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		DRAWN - AJF	REVISED -				55/70/64	82-4T-1	ST. CLAIR	185	51
	PLOT SCALE = 0:2.0000 '1' / in.	CHECKED - LMS	REVISED -				CONTRACT NO. 76C99				
	PLOT DATE = 1/13/2015	DATE - 08/22/2014	REVISED -				ILLINOIS FED. AID PROJECT				
SCALE:		SHEET 01 OF 04 SHEETS		STA.		TO STA.					

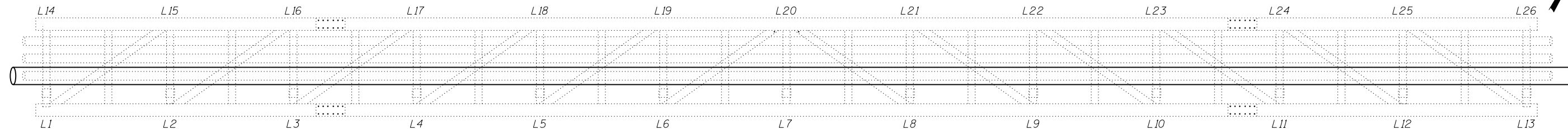


ELEVATION

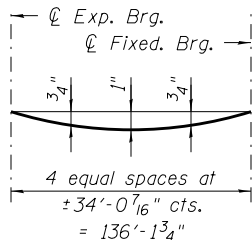
(Looking North)



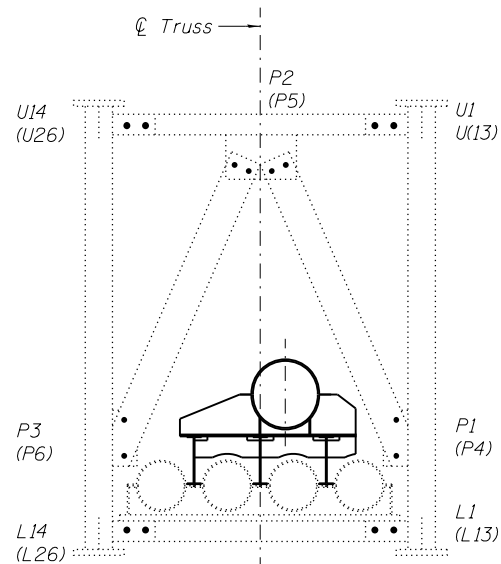
UPPER CHORD PLAN



LOWER CHORD PLAN



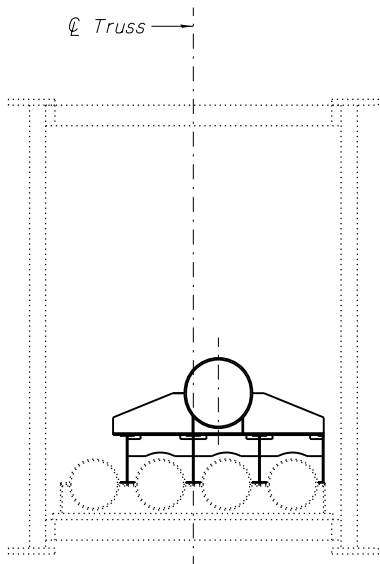
**TRUSS DEFLECTION DUE
TO NEW 24" Ø FORCE MAIN**



**CROSS SECTION AT
END PORTAL**

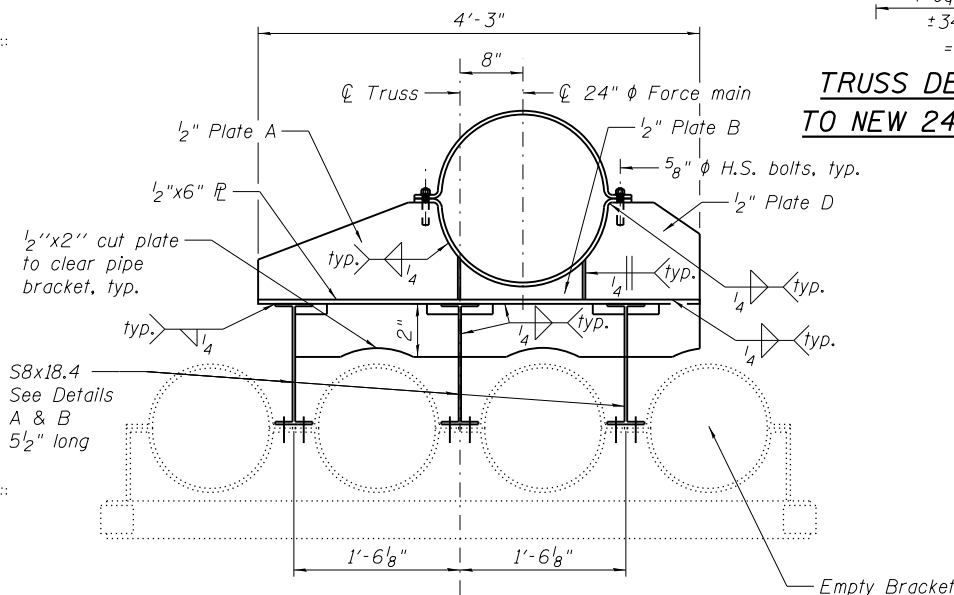
(Looking East)

(The nodes shown in parenthesis are at fixed bearing)



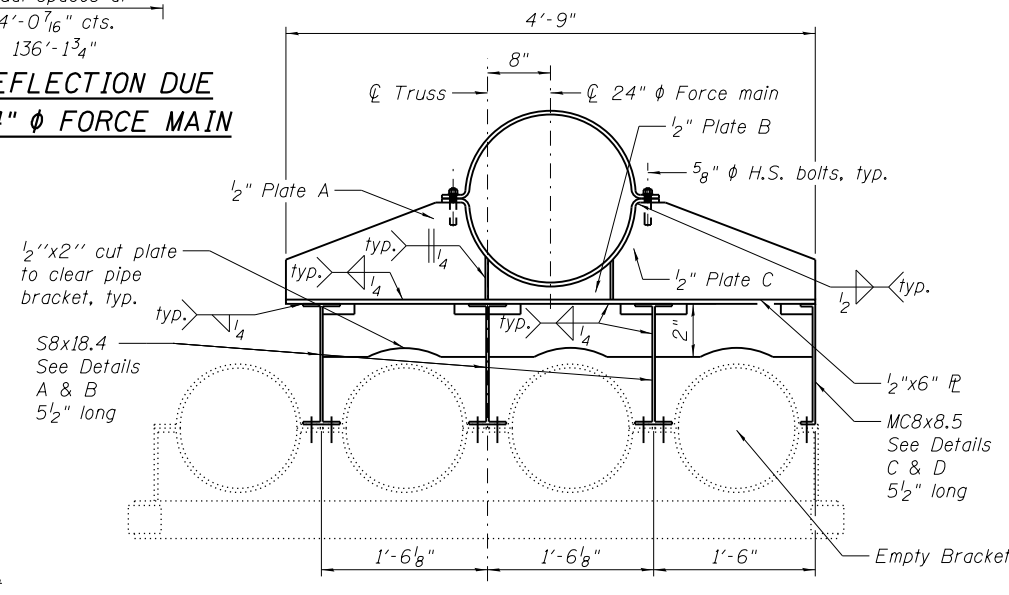
**CROSS SECTION AT
INTERIOR PIPE SUPPORT**

(Looking East)



CROSS SECTION

(Looking East)



CROSS SECTION

(Looking East)

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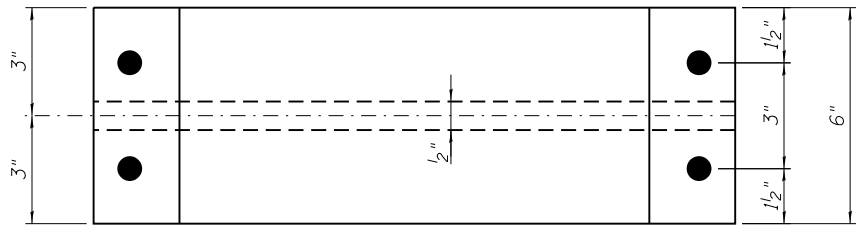
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	DRAWN - AJF	REVISED -
PLOT SCALE = 0:2.0000 '1' / 1"	CHECKED - LMS	REVISED -
PLOT DATE = 1/13/2015	DATE - 08/22/2014	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

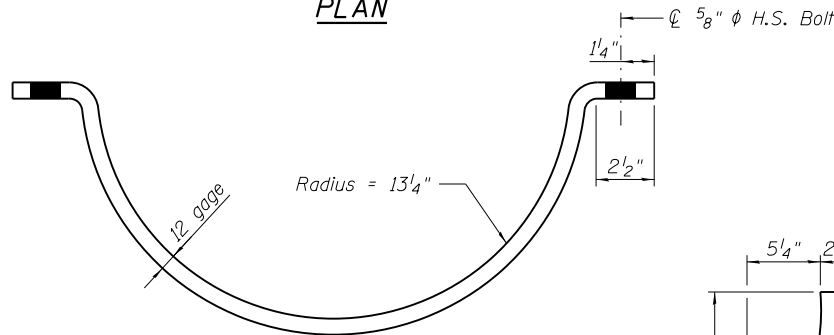
PIPE BRIDGE PLAN & DETAILS - TRUSS DETAILS
MISSOURI AVENUE DEEP WELL FACILITY

SCALE: SHEET 02 OF 04 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55/70/64	82-4T-1	ST. CLAIR	185	52
CONTRACT NO. 76G99				
ILLINOIS FED. AID PROJECT				



PLAN



NEW PIPE SADDLE
(50 required)

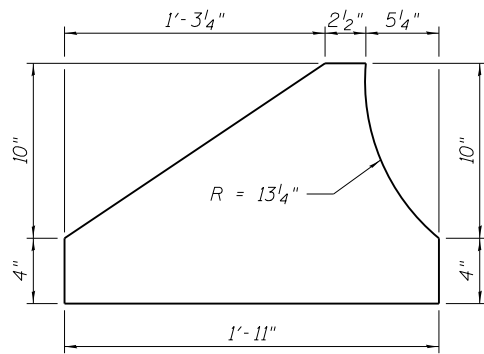


PLATE A

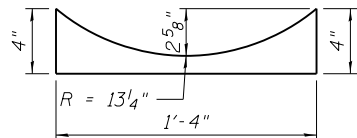


PLATE B

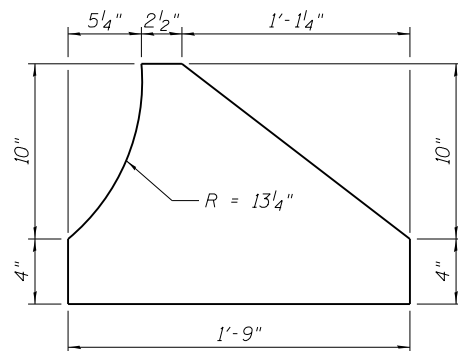


PLATE C

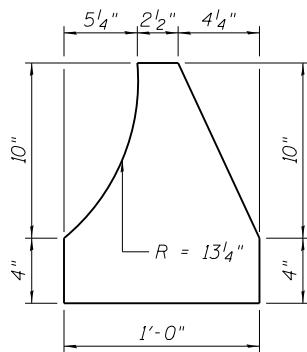
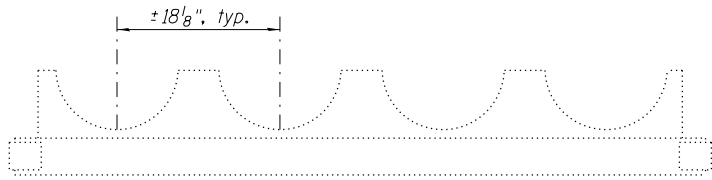
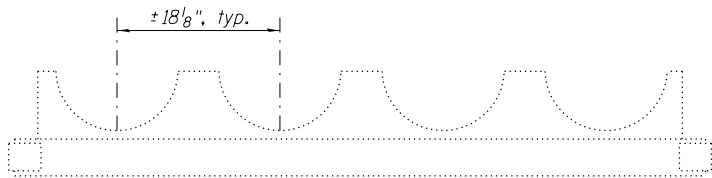


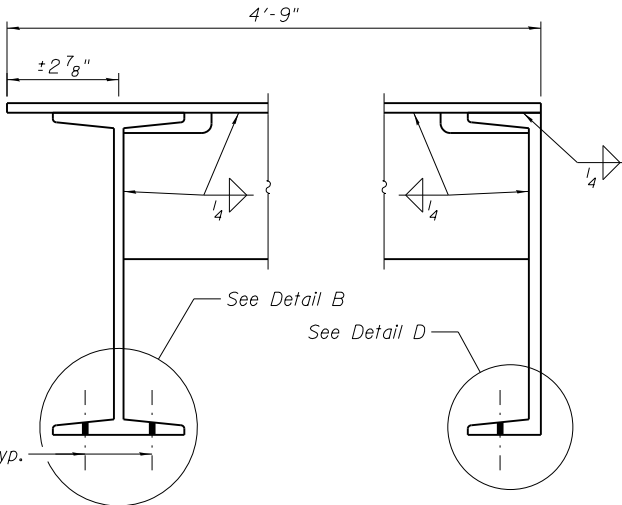
PLATE D



EXISTING PIPE SUPPORT @
INTERIOR BOTTOM STRUTS

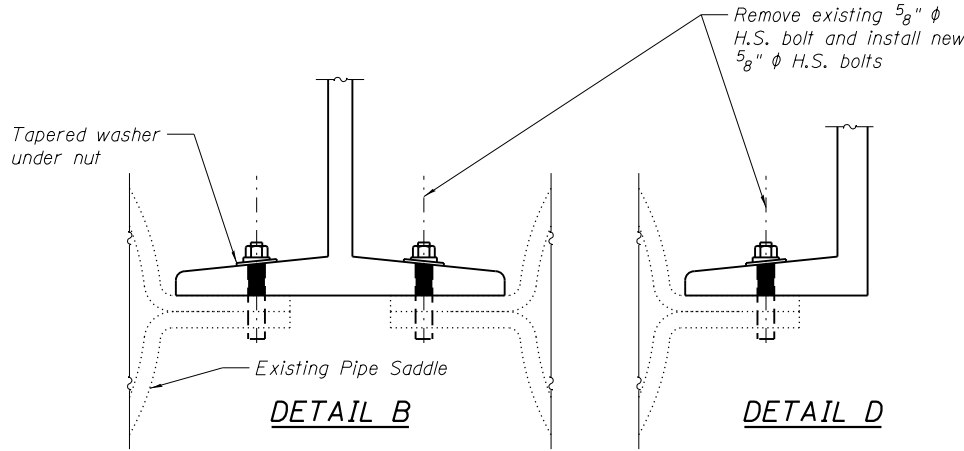


EXISTING PIPE SUPPORT @
PORTAL BOTTOM STRUTS



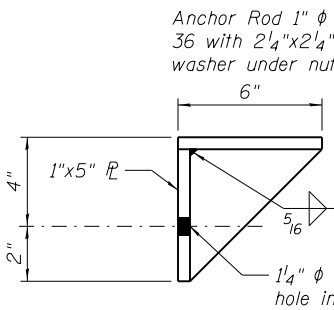
DETAIL A

DETAIL C

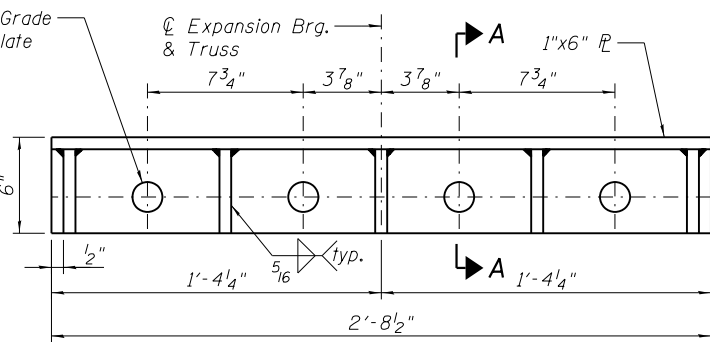


DETAIL B

DETAIL D

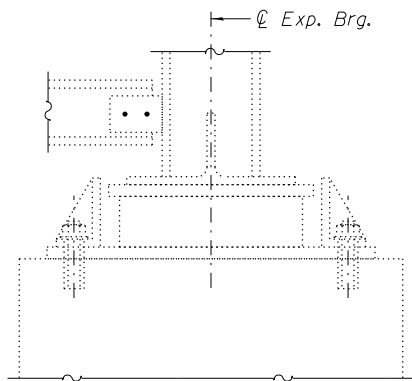


SECTION A-A

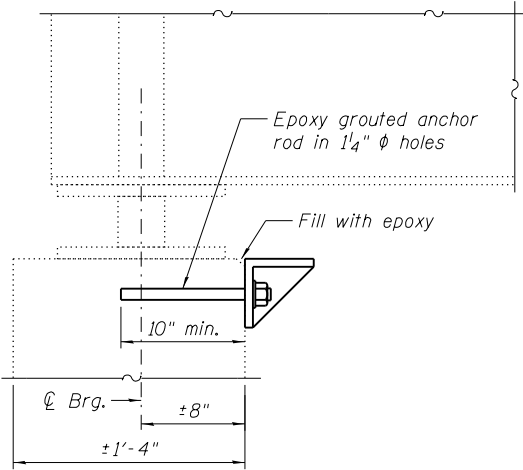


ELEVATION

BRIDGE SEAT EXTENSION ASSEMBLY
(At Expansion Bearings only)
(2 required)



EXISTING EXPANSION
BEARING DETAIL



END VIEW

Notes:
Anchor rods shall be ASTM F1554 all thread (or an Engineer approved alternate material) of the grade(s) and diameters specified. The corresponding specified grade of AASHTO M314 Anchor rods may be used.
Drilling and setting of anchor rods shall be according to article 521.06 of the Standard Specification.
The Contractor shall mark the location of existing reinforcement bars on the face of concrete. Use rebar cover-meter. The anchor rod holes shall be drilled to miss the existing reinforcement.

FILE NAME = Q:\11\Files\110023\Work - Order - 6\CA0D Sheets\1108-1.dgn

 LIN ENGINEERING, LTD. Consulting Engineers Springfield, Illinois	USER NAME = bgj	DESIGNED - RGB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PIPE BRIDGE PLAN & DETAILS MISSOURI AVENUE DEEP WELL FACILITY	SCALE:	SHEET 03 OF 04 SHEETS	STA.	TO STA.	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 0:2.0000 '1' / 1"	DRAWN - AJF	REVISED -							55/70/64	82-4T-1	ST. CLAIR	185	53
	PLOT DATE = 1/13/2015	CHECKED - LMS	REVISED -							CONTRACT NO. 76C99				
		DATE - 08/22/2014	REVISED -							ILLINOIS FED. AID PROJECT				

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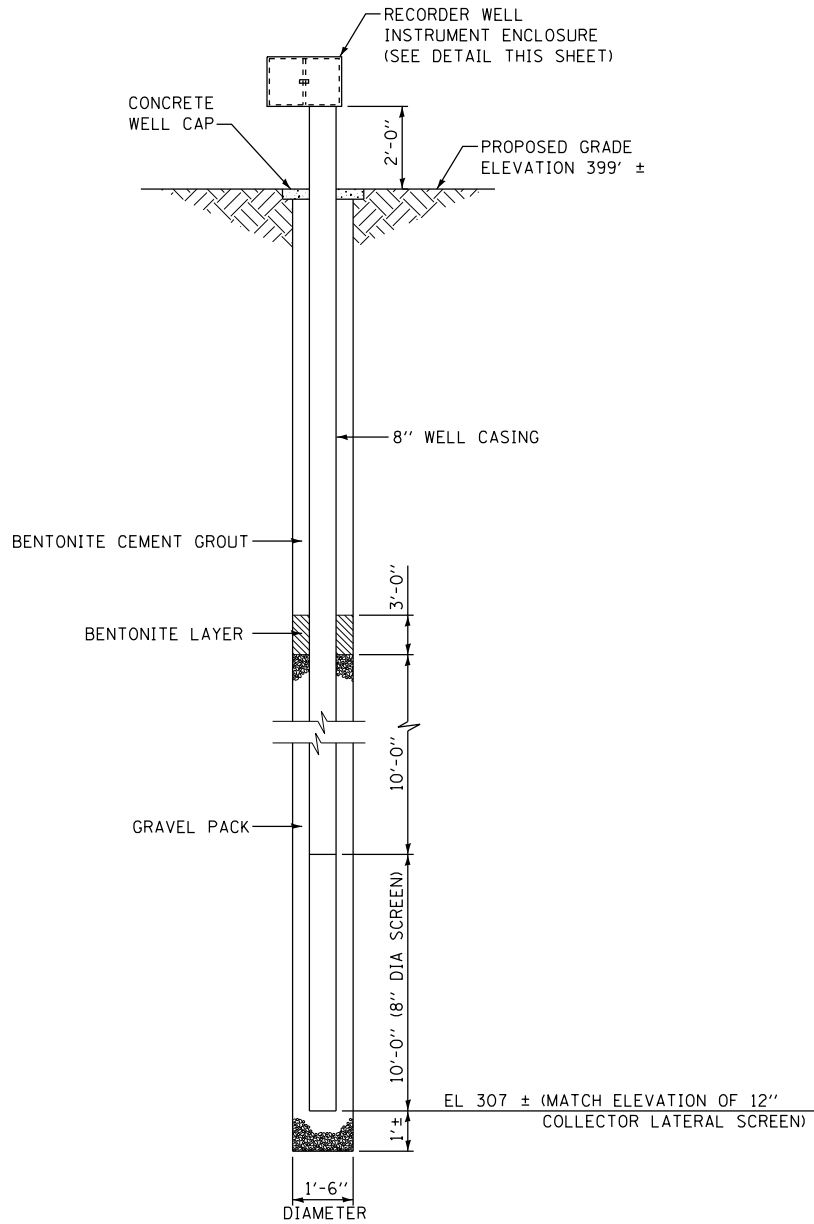
STRESS TABLE

		Service I		Strength I		Strength III	
Members		Axial	Bending	Axial	Bending	Axial	Bending
		Front Lower Chord					
L1	L2	-5.2	37.7	0.9	56.3	-26.4	36.9
L2	L3	22.9	34.6	47.6	51.3	-13.9	34.1
L3	L4	46.6	37.8	85.9	56.0	-0.9	37.4
L4	L5	65.7	38.7	115.7	57.1	12.7	38.7
L5	L6	80.4	39.5	137.2	58.4	26.9	39.1
L6	L7	90.0	40.7	149.4	58.9	41.0	43.3
L7	L8	90.3	40.6	149.4	58.9	42.1	43.3
L8	L9	85.1	39.6	137.9	58.5	47.0	39.4
L9	L10	74.7	39.0	117.0	57.2	51.8	39.7
L10	L11	60.1	38.2	87.8	56.1	57.3	39.1
L11	L12	40.8	35.1	50.1	51.4	63.4	36.2
L12	L13	17.1	38.5	4.0	56.4	69.9	40.2
Rear Lower Chord							
L14	L15	0.4	40.3	0.5	59.6	0.6	40.8
L15	L16	39.8	36.9	49.2	54.3	60.6	37.7
L16	L17	71.7	40.2	89.2	59.2	108.1	40.8
L17	L18	96.0	41.0	120.2	60.4	143.0	41.2
L18	L19	112.8	42.1	142.3	61.8	165.5	42.7
L19	L20	122.0	41.7	155.3	62.5	175.1	39.3
L20	L21	117.6	41.6	154.7	62.5	156.1	39.0
L21	L22	104.0	41.8	141.1	61.7	127.4	41.8
L22	L23	82.8	40.6	118.3	60.4	86.0	39.7
L23	L24	54.0	39.7	86.7	59.2	31.9	38.6
L24	L25	17.7	36.3	46.1	54.2	-34.6	36.9
L25	L26	-26.1	39.4	-3.2	59.5	-113.8	36.9
Front Upper Chord							
U1	U2	-37.7	14.8	-47.0	20.9	-56.7	15.7
U2	U3	-68.2	7.0	-85.0	10.1	-102.5	6.5
U3	U4	-91.9	7.2	-114.5	10.2	-138.0	6.8
U4	U5	-108.7	8.9	-135.5	12.5	-163.1	8.9
U5	U6	-118.9	9.4	-148.3	13.5	-178.2	9.1
U6	U7	-121.5	10.5	-151.6	13.8	-182.2	13.7
U7	U8	-121.5	10.5	-151.6	13.8	-182.2	13.7
U8	U9	-118.8	9.5	-148.3	13.5	-178.2	9.4
U9	U10	-108.7	9.1	-135.5	12.6	-163.0	9.9
U10	U11	-91.8	7.5	-114.5	10.2	-137.8	8.4
U11	U12	-68.2	7.6	-85.0	10.2	-102.3	8.8
U12	U13	-37.7	13.8	-47.0	20.8	-56.5	11.7
Rear Upper Chord							
U14	U15	-34.1	15.3	-49.5	22.1	-33.6	15.4
U15	U16	-56.8	7.7	-89.8	10.5	-37.5	8.4
U16	U17	-74.3	7.7	-121.1	10.6	-39.7	8.2
U17	U18	-86.6	9.3	-143.5	13.0	-40.2	9.5
U18	U19	-93.7	10.1	-157.1	14.0	-38.8	10.7
U19	U20	-95.5	9.6	-161.5	14.6	-35.8	7.5
U20	U21	-95.7	9.6	-161.5	14.6	-37.0	6.9
U21	U22	-94.0	9.9	-157.1	14.0	-40.0	9.8
U22	U23	-86.9	8.9	-143.5	13.0	-41.4	7.9
U23	U24	-74.6	7.2	-121.1	10.5	-41.0	6.0
U24	U25	-57.1	7.0	-89.8	10.5	-38.8	5.6
U25	U26	-34.4	16.4	-49.6	22.2	-34.9	20.2
Front Truss Vertical							
L2	U2	-20.4	0.4	-29.2	0.5	-20.6	0.5
L3	U3	-16.1	0.4	-23.1	0.5	-16.4	0.5
L4	U4	-11.6	0.3	-16.6	0.4	-11.9	0.4
L5	U5	-7.2	0.2	-10.2	0.3	-7.5	0.3
L6	U6	-2.7	0.1	-3.8	0.1	-3.0	0.3
L7	U7	-0.4	0.0	-0.5	0.0	-0.2	0.0
L8	U8	-2.6	0.1	-3.7	0.1	-2.2	0.3
L9	U9	-7.0	0.2	-10.2	0.2	-6.7	0.3
L10	U10	-11.4	0.3	-16.6	0.4	-11.1	0.3
L11	U11	-15.9	0.4	-23.0	0.5	-15.6	0.4
L12	U12	-20.2	0.4	-29.2	0.5	-19.8	0.4
Rear Truss Vertical							
L15	U15	-21.3	0.4	-30.8	0.6	-21.1	0.4
L16	U16	-16.9	0.4	-24.4	0.6	-16.6	0.3
L17	U17	-12.2	0.2	-17.6	0.4	-11.9	0.1
L18	U18	-7.5	0.2	-10.8	0.3	-7.2	0.0
L19	U19	-2.8	0.1	-4.1	0.1	-2.6	0.1
L20	U20	-0.6	0.0	-0.7	0.0	-0.7	0.0
L21	U21	-3.0	0.1	-4.1	0.1	-3.4	0.1
L22	U22	-7.7	0.2	-10.9	0.3	-8.0	0.1
L23	U23	-12.3	0.3	-17.6	0.4	-12.7	0.2
L24	U24	-17.1	0.4	-24.4	0.6	-17.4	0.4
L25	U25	-21.5	0.4	-30.9	0.6	-21.9	0.5

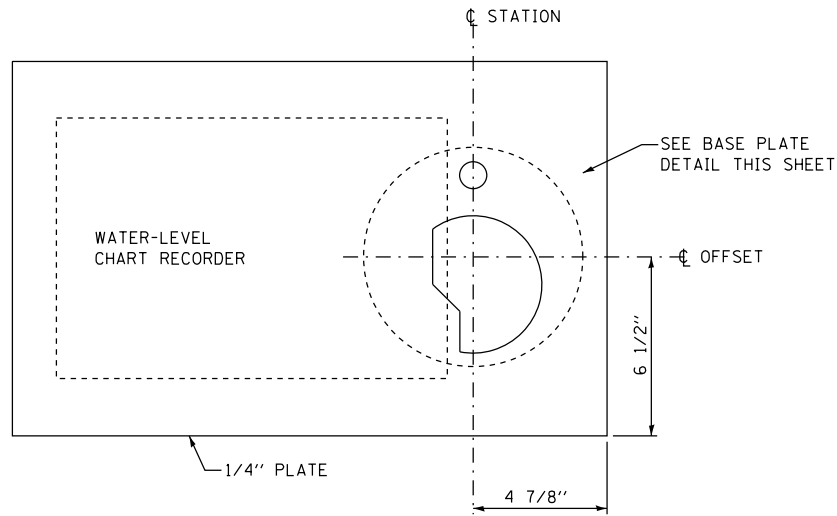
		Service I		Strength I		Strength III	
Members		Axial	Bending	Axial	Bending	Axial	Bending
		Lower Chord Struts					
L1	L14	0.0	35.5	0.0	47.6	0.0	84.3
L2	L15	-2.8	54.3	0.2	81.2	-13.6	54.3
L3	L16	-2.1	54.3	0.2	81.3	-10.0	54.3
L4	L17	-1.3	54.3	0.1	81.3	-6.4	54.3
L5	L18	-0.5	54.3	0.2	81.3	-2.7	54.4
L6	L19	0.2	54.3	0.0	81.3	0.8	54.4
L7	L20	-0.8	54.3	-0.5	81.3	-2.5	54.4
L8	L21	-2.2	54.3	-0.3	81.3	-9.4	54.4
L9	L22	-2.8	54.3	-0.1	81.3	-12.9	54.4
L10	L23	-3.7	54.3	-0.2	81.3	-16.6	54.4
L11	L24	-4.4	54.3	-0.2	81.3	-20.2	54.4
L12	L25	-5.2	54.3	-0.2	81.2	-23.9	54.3
L13	L26	0.0	36.1	0.0	47.6	0.0	86.7
Upper Chord Struts							
U2	U15	-2.7	0.0	0.0	0.0	-12.5	0.0
U3	U16	-2.1	0.0	0.0	0.0	-9.9	0.0
U4	U17	-1.5	0.0	0.0	0.0	-7.3	0.1
U5	U18	-1.0	0.0	0.0	0.0	-4.8	0.1
U6	U19	-0.3	0.1	0.2	0.1	-2.1	0.2
U7	U20	0.1	0.1	0.5	0.1	-0.7	0.2
U8	U21	-0.5	0.1	0.2	0.1	-2.7	0.2
U9	U22	-1.2	0.1	0.0	0.0	-5.4	0.2
U10	U23	-1.7	0.1	0.0	0.0	-7.9	0.2
U11	U24	-2.3	0.0	0.0	0.0	-10.5	0.1
U12	U25	-2.8	0.0	0.0	0.0	-13.1	0.1
Lower Bracing Diagonals							
L1	L15	6.4	0.0	-0.4	0.0	30.7	0.0
L2	L16	4.8	0.0	-0.3	0.0	23.3	0.0
L3	L17	3.2	0.0	-0.3	0.0	16.0	0.1
L4	L18	1.7	0.0	-0.2	0.1	8.6	0.1
L5	L19	-0.1	0.0	-0.5	0.1	1.1	0.1
L6	L20	-0.9	0.0	0.6	0.1	-5.8	0.1
L8	L20	3.9	0.0	1.3	0.1	15.2	0.1
L9	L21	4.8	0.0	0.2	0.1	21.8	0.1
L10	L22	6.5	0.0	0.4	0.0	29.4	0.1
L11	L23	8.1	0.0	0.4	0.0	36.7	0.1
L12	L24	9.7	0.0	0.4	0.0	44.0	0.1
L13	L25	11.2	0.0	0.3	0.0	51.7	0.1
Upper Bracing Diagonals							
U1	U15	5.8	0.0	0.0	0.1	27.2	0.0
U2	U16	4.7	0.0	-0.1	0.0	22.1	0.0
U3	U17	3.6	0.0	0.0	0.0	17.0	0.0
U4	U18	2.5	0.0	-0.1	0.0	11.8	0.0
U5	U19	1.6	0.0	0.2	0.0	6.9	0.1
U6	U20	-0.3	0.0	-0.9	0.0	1.0	0.1
U8	U20	0.0	0.0	-0.9	0.0	2.3	0.1
U9	U21	1.9	0.0	0.2	0.0	8.2	0.1
U10	U22	2.8	0.0	-0.1	0.0	13.1	0.1
U11	U23	3.9	0.0	0.0	0.0	18.2	0.1
U12	U24	5.0	0.0	0.0	0.0	23.3	0.1
U13	U25	6.1	0.0	0.0	0.1	28.5	0.0
Front Truss Diagonals							
L2	U1	40.5	0.0	58.4	0.1	40.9	0.1
L3	U2	33.2	0.0	47.7	0.1	33.6	0.1
L4	U3	25.8	0.0	37.1	0.1	26.3	0.1
L5	U4	18.5	0.0	26.5	0.1	18.9	0.2
L6	U5	11.1	0.1	15.9	0.1	11.6	0.2
L7	U6	3.7	0.1	5.2	0.1	4.0	0.3
L7	U8	3.4	0.1	5.2	0.1	2.7	0.3
L8	U9	10.8	0.1	15.8	0.1	10.3	0.3
L9	U10	18.1	0.0	26.4	0.1	17.5	0.3
L10	U11	25.5	0.0	37.1	0.1	24.9	0.2
L11	U12	32.9	0.0	47.7	0.1	32.2	0.2
L12	U13	40.2	0.0	58.3	0.1	39.6	0.1
Rear Truss Diagonals							
L15	U14	42.5	0.1	61.6	0.0	42.0	0.1
L16	U15	34.8	0.1	50.4	0.0	34.4	0.2
L17	U16	27.1	0.1	39.3	0.0	26.6	0.2
L18	U17	19.3	0.1	28.1	0.1	18.9	0.2
L19	U18	11.6	0.1	16.9	0.1	11.1	0.3
L20	U19	3.9	0.1	5.8	0.1	3.6	0.4
L20	U21	4.2	0.2	5.8	0.1	5.0	0.4
L21	U22	11.9	0.1	17.0	0.1	12.4	0.4
L22	U23	19.7	0.1	28.2	0.1	20.3	0.4
L23	U24	27.4	0.1	39.3	0.0	28.0	0.3
L24	U25	35.1	0.1	50.5	0.0	35.8	0.3
L25	U26	42.8	0.1	61.6	0.0	43.4	0.2

		Service I		Strength I		Strength III	
Members		Axial	Bending	Axial	Bending	Axial	Bending
		Portal at Expansion Bearing					
L1	P1	-21.2	27.9	-36.1	34.6	-7.2	67.6
P1	U1	-24.6	22.3	-35.3	20.3	-25.0	54.6
U1	P2	-3.3	13.8	-0.2	20.6	-15.2	12.2
P2	U14	0.1	14.9	-0.2	20.8	0.9	16.6
P3	U14	-25.6	4.5	-37.1	19.7	-25.2	27.9
L14	P3	-30.1	35.8	-37.9	33.6	-44.1	84.9
P1	P2	3.7	0.7	-0.9	1.0	19.5	0.6
P3	P2	-4.9	0.9	-0.9	1.3	-20.6	1.0
Portal at Fixed Bearing							
L13	P4	-20.8	28.3	-36.0	34.5	-5.6	69.6
P4	U13	-24.4	22.6	-35.2	20.3	-24.1	56.2
U13	P5	-3.5	13.8	-0.2	20.6	-15.9	12.1
P5	U26	0.1	14.9	-0.2	20.8	0.9	16.8
P6	U26	-25.8	4.6	-37.2	19.6	-26.1	29.5
L26	P6	-30.5	36.4	-38.0	33.7	-45.7	87.5
P4	P5	3.9	0.7	-0.9	1.0	20.3	4.4
P6	P5	-5.1	0.8	-0.9	1.2	-21.5	4.5

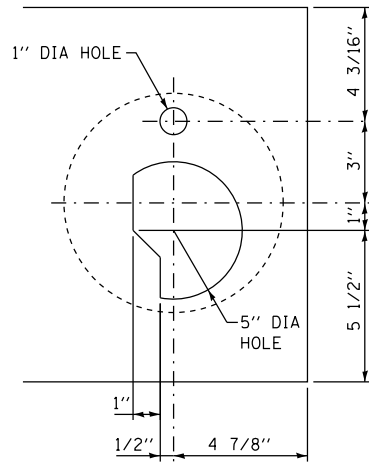
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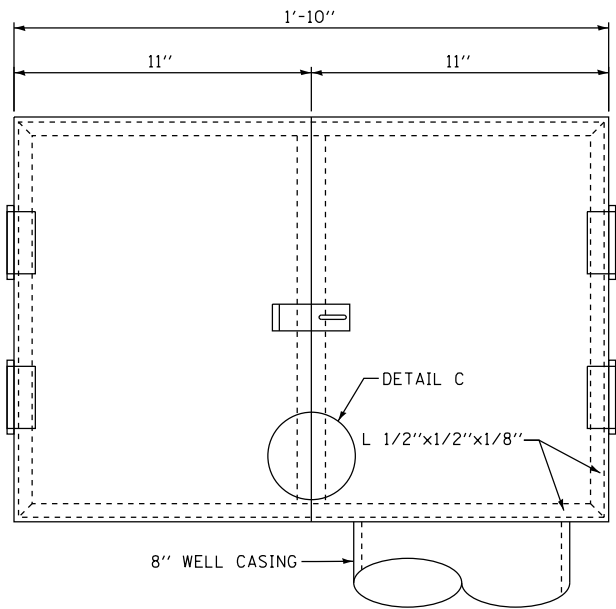
RECORDER WELL NO. 1A
NOT TO SCALE



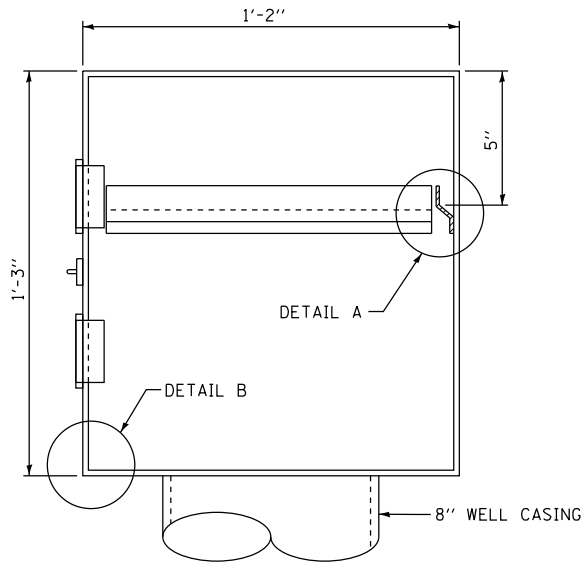
BASE PLATE PLAN
NOT TO SCALE



BASE PLATE DETAIL
NOT TO SCALE



ENCLOSURE ELEVATION



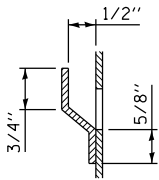
ENCLOSURE SIDE VIEW

TYPICAL RECORDER WELL INSTRUMENT ENCLOSURE
NOT TO SCALE

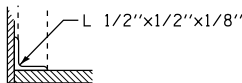
NOTES:

1. CONSTRUCT THE PROPOSED RECORDER WELLS AT THE LOCATIONS INDICATED ON THIS DRAWING. REFER TO SPECIAL PROVISIONS FOR INSTALLATION PROCEDURES.
2. BRACKET INSTALLED ON BACK AND BOTH SIDES OF ENCLOSURE.

RECORDER WELL NUMBER	STATION	OFFSET
RW NO. 1	121+93.0 ROADWAY B	26.4' RT



DETAIL A
NOTE 2

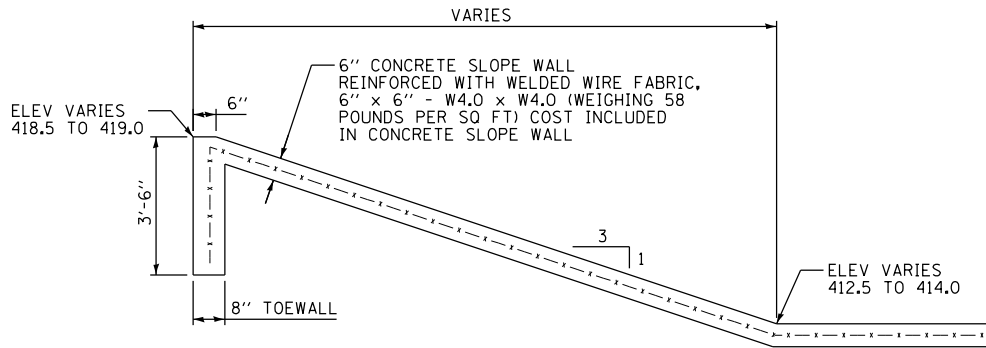


DETAIL B

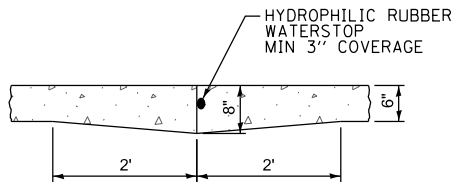


DETAIL C

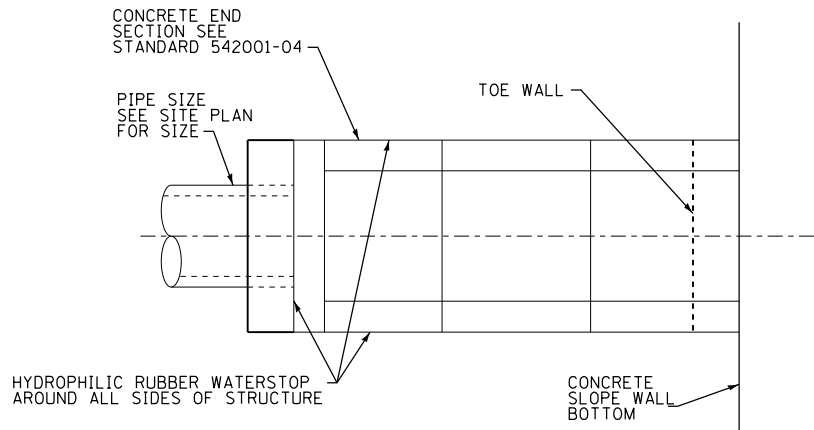
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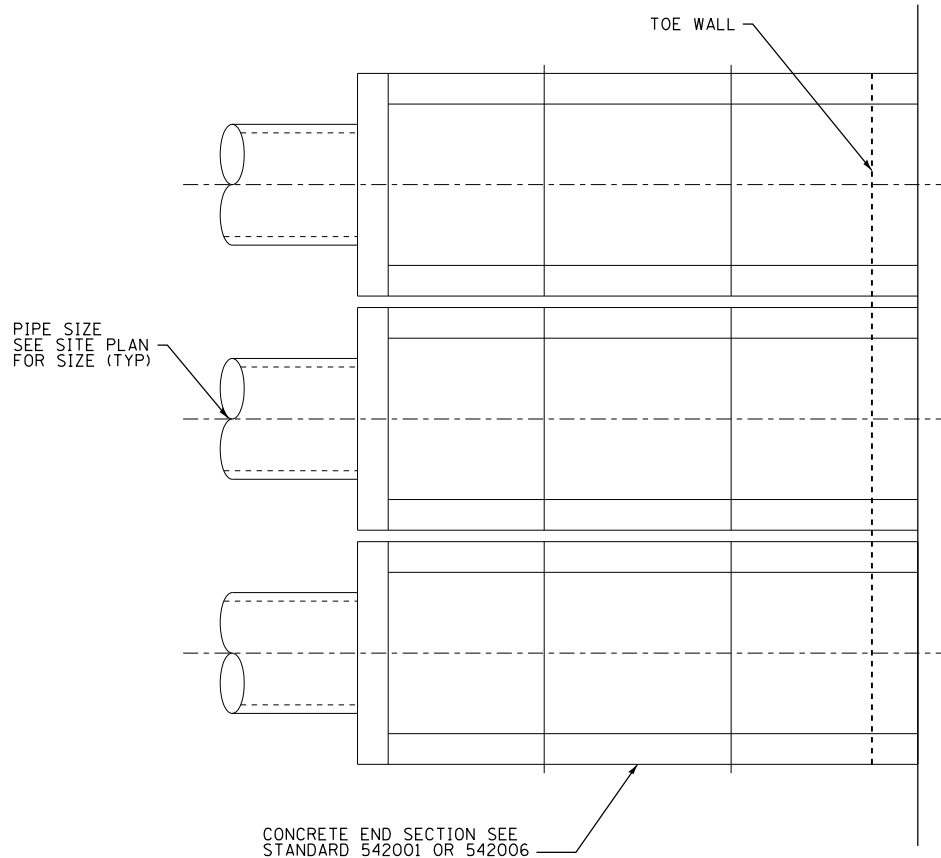
CONCRETE SLOPE WALL DETAIL – TYPICAL SECTION
NOT TO SCALE



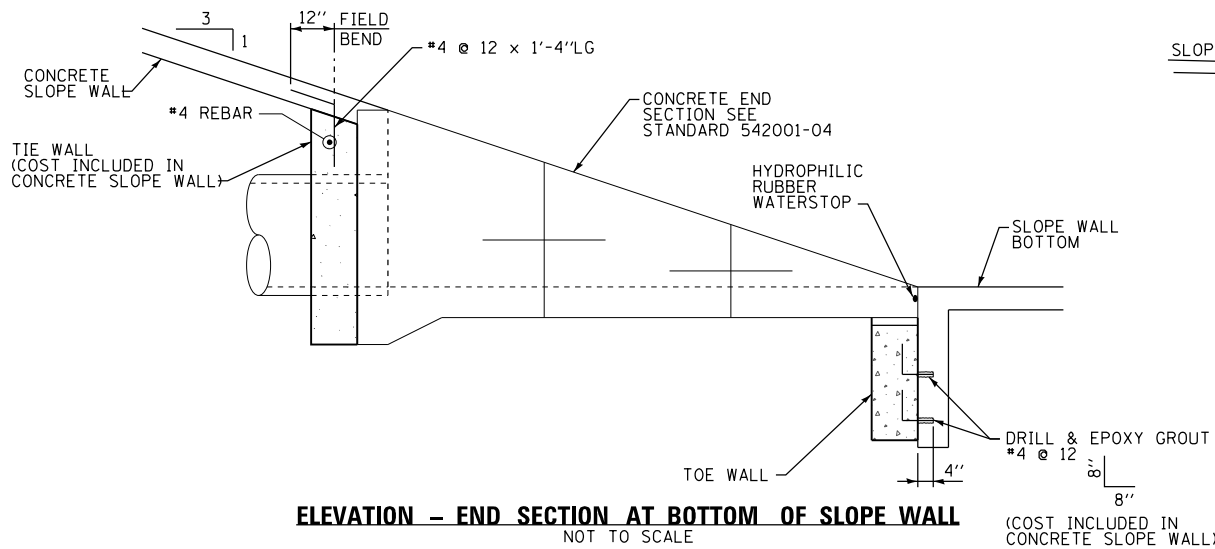
TYPICAL SLOPE WALL CONSTRUCTION JOINT DETAIL
NOT TO SCALE



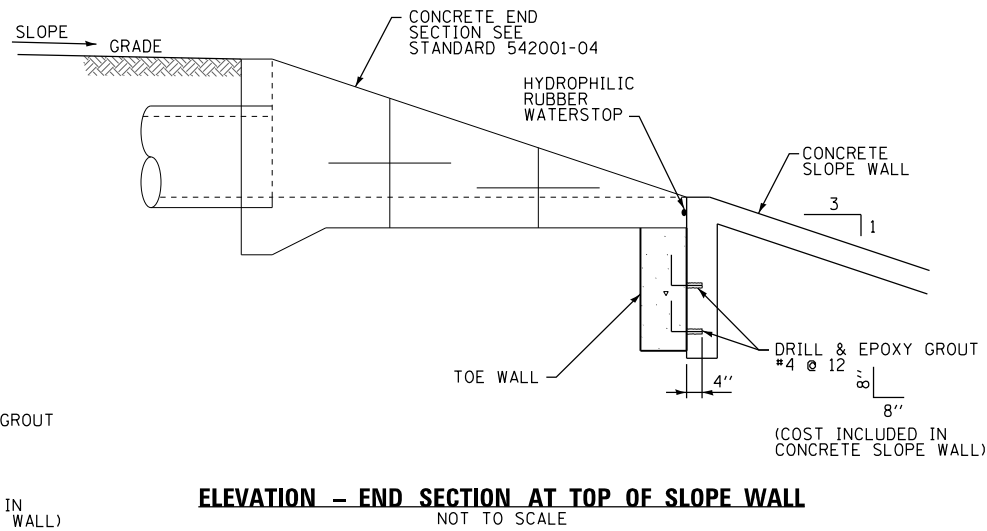
PLAN – END SECTION AT BOTTOM OF SLOPE WALL
NOT TO SCALE



PLAN – END SECTION AT TOP OF SLOPE WALL
NOT TO SCALE



ELEVATION – END SECTION AT BOTTOM OF SLOPE WALL
NOT TO SCALE



ELEVATION – END SECTION AT TOP OF SLOPE WALL
NOT TO SCALE

KLINGNER & ASSOCIATES, P.C.
Engineers • Architects • Surveyors

USER NAME = bgj
PLOT SCALE = 0.1667' / in.
PLOT DATE = 1/13/2015

DESIGNED - SEB
DRAWN - BGJ
CHECKED -
DATE -

REVISED -
REVISED -
REVISED -
REVISED -

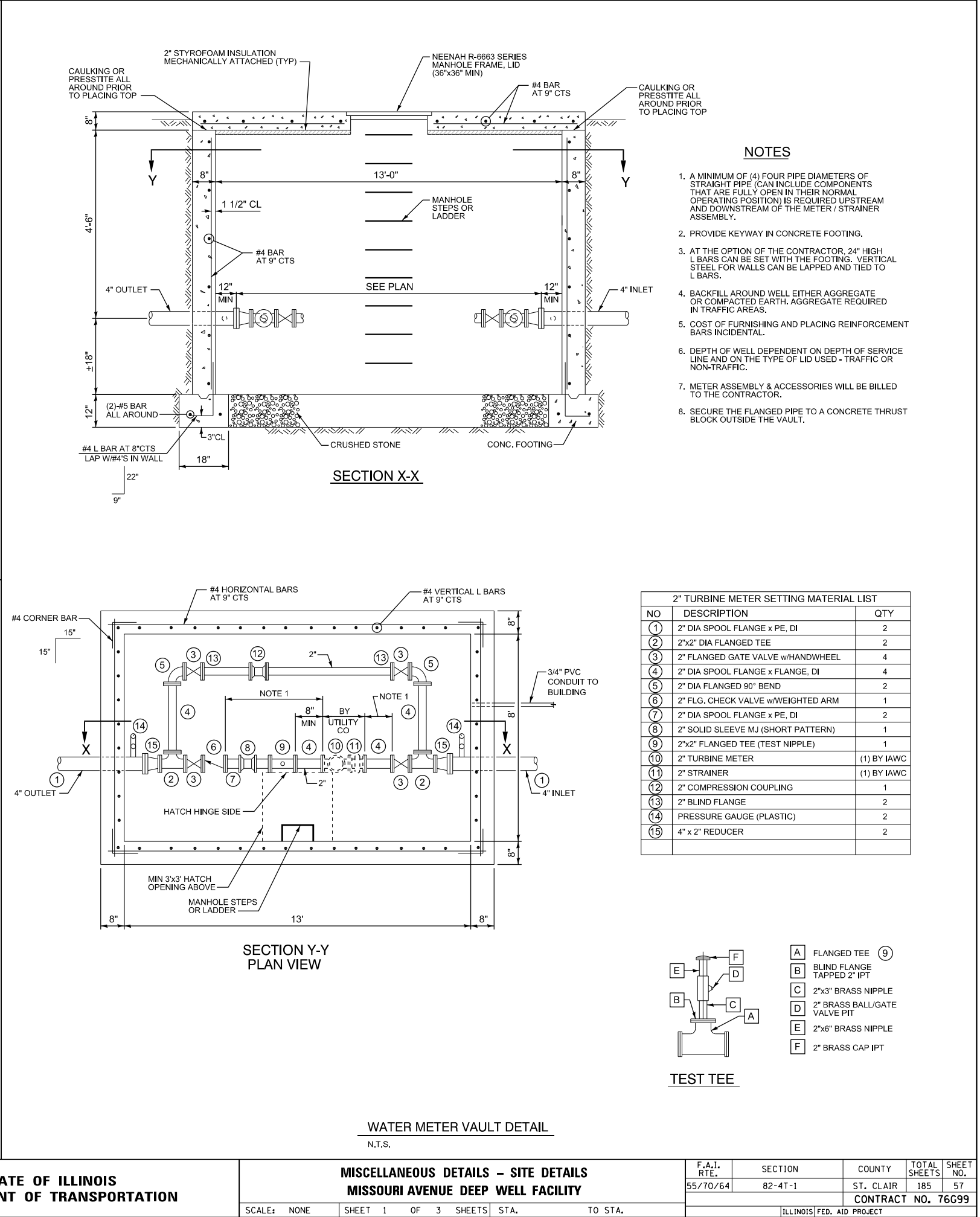
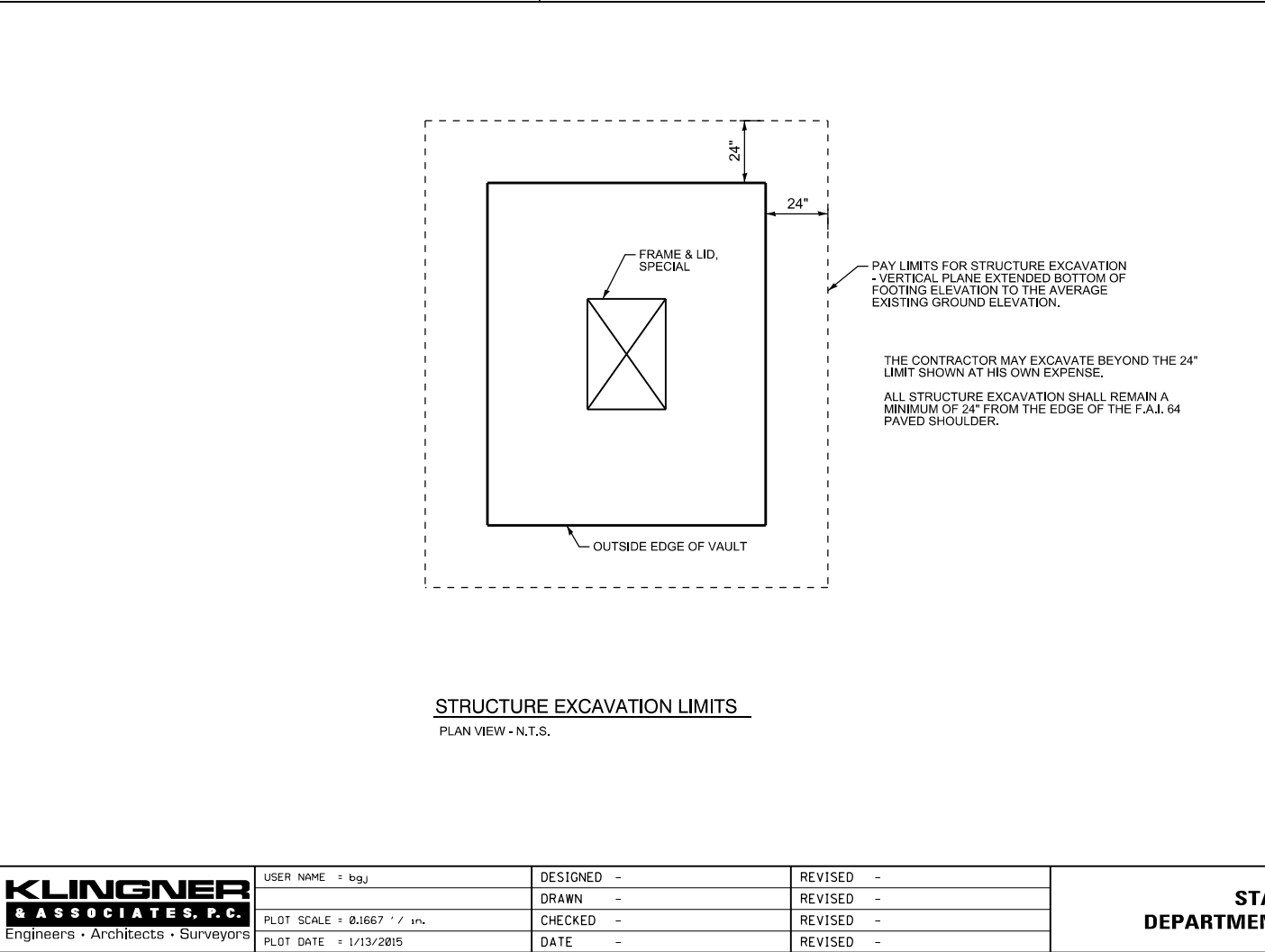
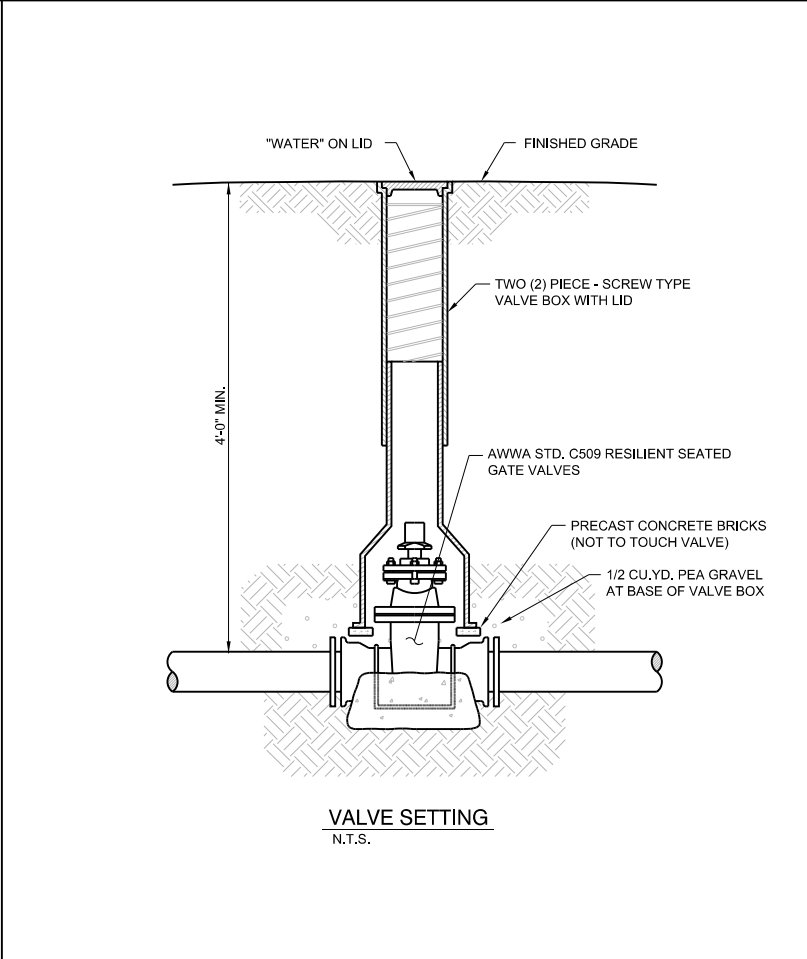
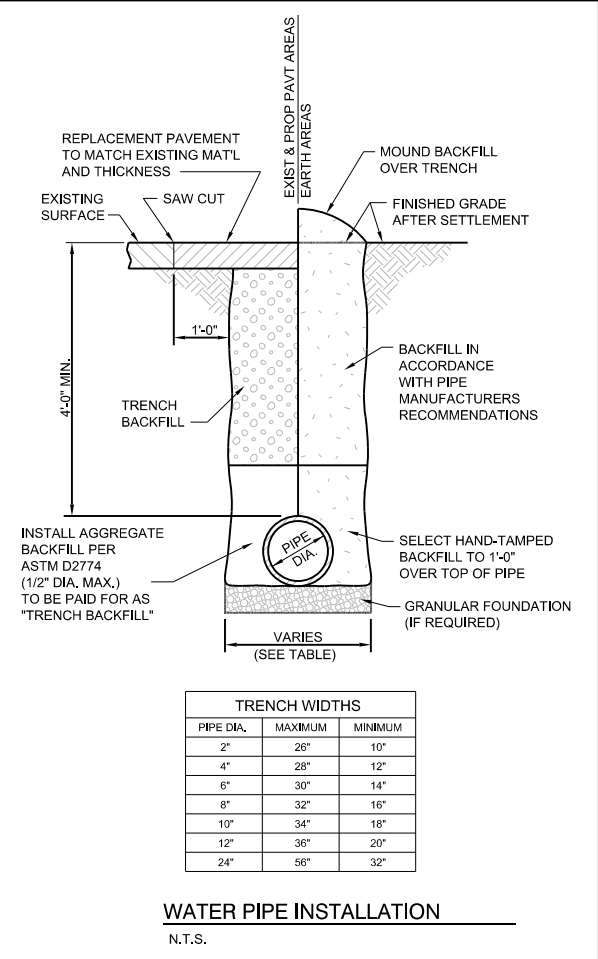
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

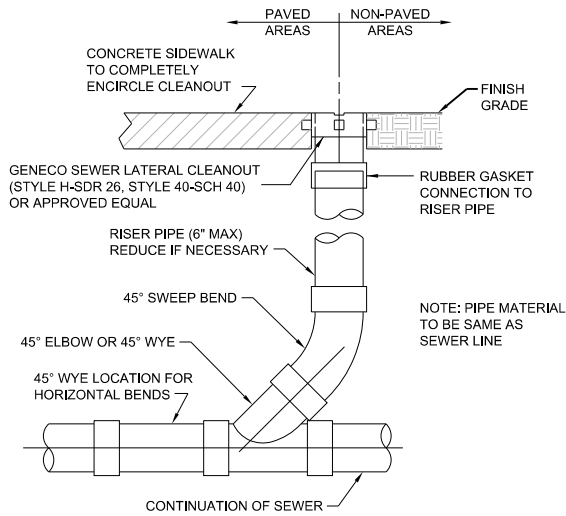
MISCELLANEOUS DETAILS – CONCRETE SLOPE WALL
MISSOURI AVENUE DEEP WELL FACILITY

SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

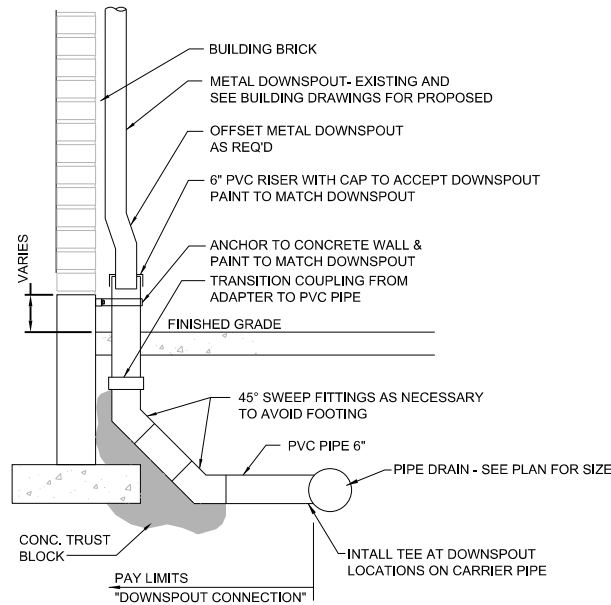
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55/70/64	82-4T-1	ST. CLAIR	185	56
CONTRACT NO. 76099				
ILLINOIS FED. AID PROJECT				

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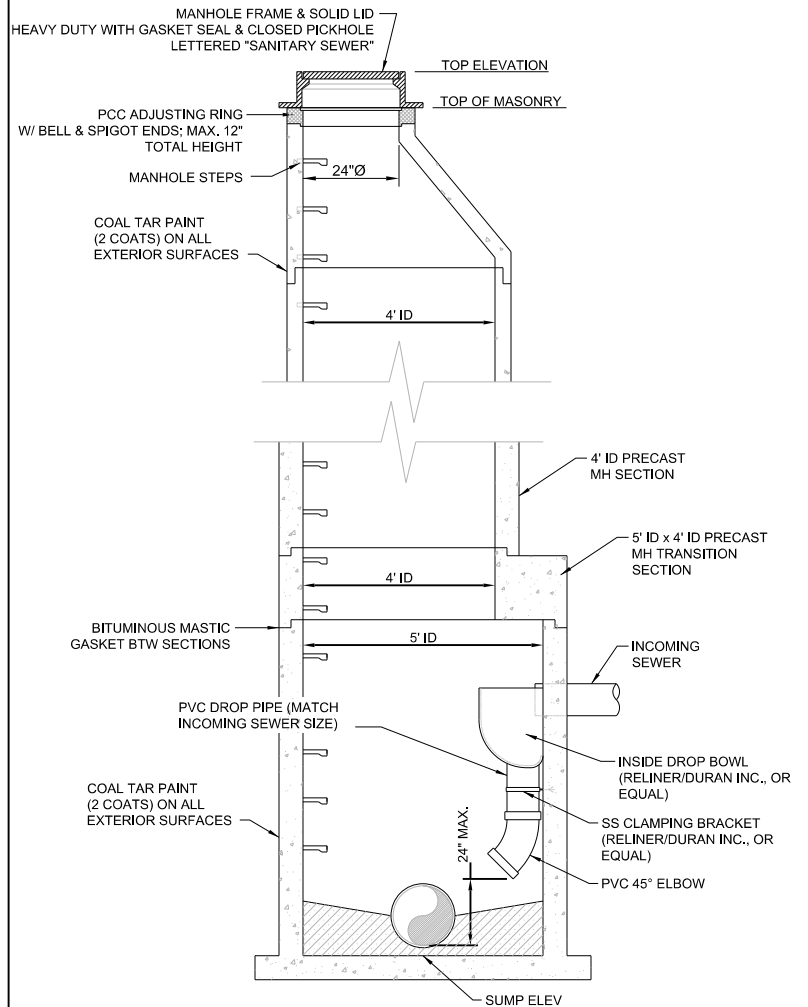




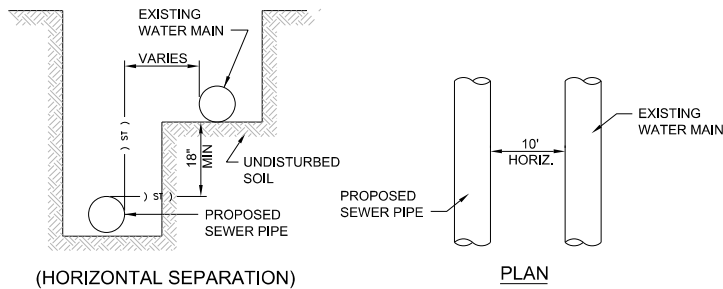
PIPE DRAIN CLEANOUT DETAILS
N.T.S.



DOWNSPOUT CONNECTION DETAIL
N.T.S.



SANITARY SEWER MANHOLE DETAIL
N.T.S.

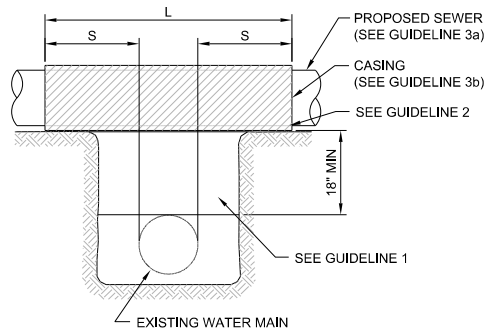


(HORIZONTAL SEPARATION)

WHEN PROPOSED SEWER IS LOCATED LESS THAN 10 FEET FROM EXISTING WATER, DETAIL ABOVE SHALL APPLY.

WHEN PROPOSED SEWER IS LOCATED 10 FEET OR MORE FROM EXISTING WATER, NO SPECIAL CONSTRUCTION REQ'D

A - WATER AND SEWER
SEPARATION REQUIREMENTS
N.T.S.



(VERTICAL SEPARATION)

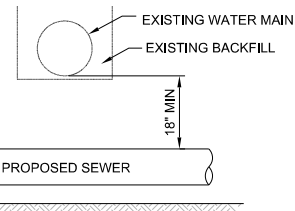
B - WATER AND SEWER
SEPARATION REQUIREMENTS
N.T.S.

WATER & SEWER SEPARATION REQUIREMENTS
N.T.S.

GUIDELINES

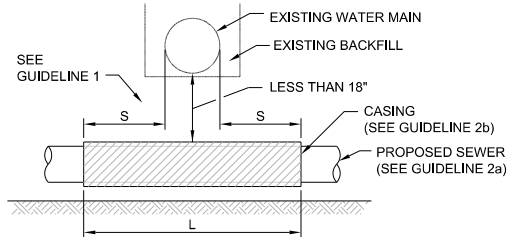
1. IF SELECT GRANULAR BACKFILL EXISTS: REMOVE WITHIN WIDTH OF SEWER TRENCH & REPLACE WITH SELECT EXCAVATED MAT'L (CLASS IV) & COMPACT.
2. OMIT SELECT GRANULAR EMBEDMENT & GRANULAR BACKFILL TO (1) FOOT OVER TOP OF SEWER & USE SELECT EXCAVATED MAT'L (CLASS IV) & COMPACT THE LENGTH OF "L" FEET.
3. a. CONSTRUCT "L" FEET OF PROPOSED SEWER OF WATER MAIN MAT'L AND PRESSURE TEST, (OR);
b. USE "L" FEET OF WATER MAIN MAT'L FOR CASING OF PROPOSED SEWER & SEAL ENDS OF CASING

NOTE: "S" IS THE LENGTH NECESSARY TO PROVIDE 10 FEET OF SEPARATION AS MEASURED PERPEND. TO THE EXISTING WATER MAIN



(VERTICAL SEPARATION)

C - WATER AND SEWER
SEPARATION REQUIREMENTS
N.T.S.



GUIDELINES

1. OMIT SELECT GRANULAR EMBEDMENT & GRANULAR WITHIN BACKFILL TO (1) FOOT OVER TOP OF SEWER & USE SELECT EXCAVATED MAT'L (CLASS IV) & COMPACT FOR "S" FT. ON EA. SIDE OF WATER MAIN
2. a. CONSTRUCT "L" FEET OF PROPOSED SEWER OF WATER MAIN MAT'L & PRESSURE TEST, (OR);
b. USE "L" FEET OF WATER MAIN MAT'L FOR CASING OF PROPOSED SEWER & SEAL ENDS OF CASING
3. PROVIDE ADEQUATE SUPPORT FOR EXISTING WATER MAIN TO PREVENT DAMAGE DUE TO SETTLEMENT OF SEWER TRENCH

NOTE: "S" IS THE LENGTH NECESSARY TO PROVIDE 10 FEET OF SEPARATION AS MEASURED PERPEND. TO THE EXISTING WATER MAIN

(VERTICAL SEPARATION)

D - WATER AND SEWER
SEPARATION REQUIREMENTS
N.T.S.

FILE NAME = G:\11\115\110023\Work - 6\CADD Sheets\0376099-sht-misc.dgn

KLINGNER & ASSOCIATES, P.C.
Engineers • Architects • Surveyors

USER NAME = bgj	DESIGNED -	REVISED -
PLOT SCALE = 0.1667' / 1\"/>	DRAWN -	REVISED -
PLOT DATE = 1/13/2015	CHECKED -	REVISED -
	DATE -	REVISED -

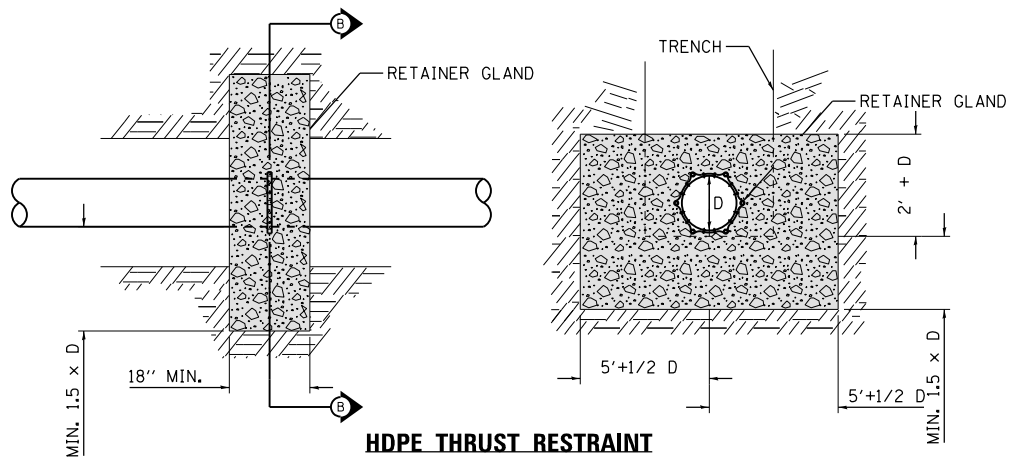
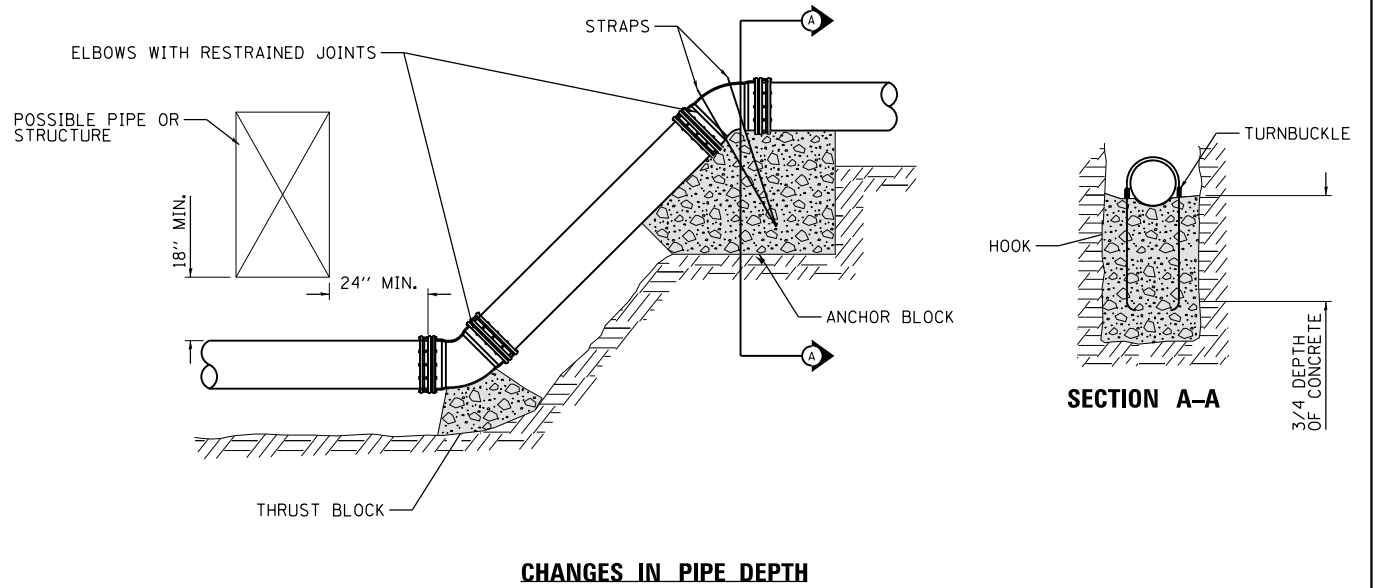
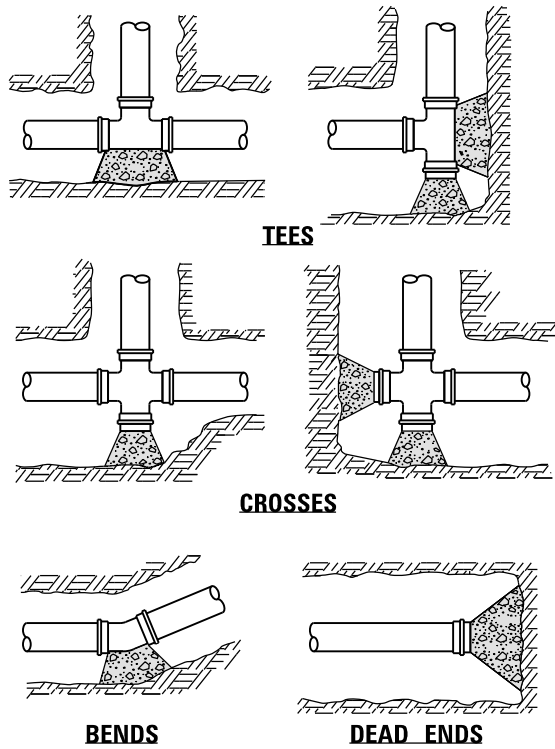
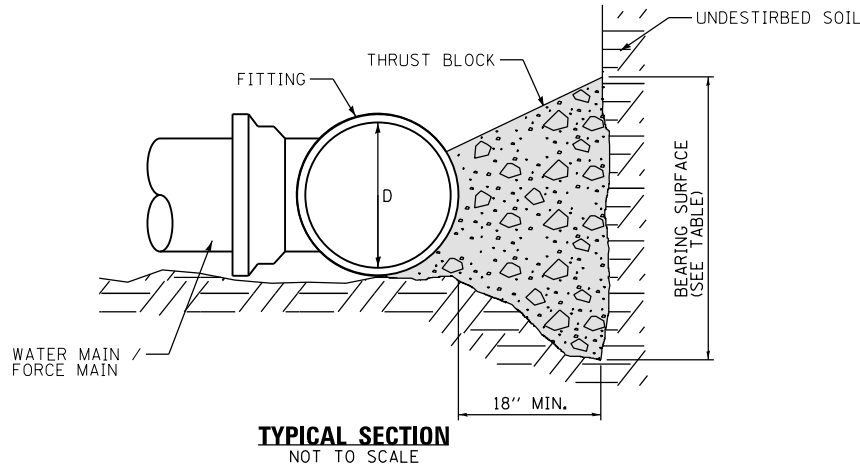
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MISCELLANEOUS DETAILS - SITE DETAILS
MISSOURI AVENUE DEEP WELL FACILITY

SCALE: NONE SHEET 2 OF 3 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55/70/64	82-4T-1	ST. CLAIR	185	58
CONTRACT NO. 76099				
ILLINOIS FED. AID PROJECT				

FILE NAME = G:\11\Files\110023\Work - Order - 6\CA00 Sheets\0876099-sht-misc.dgn



THRUST RESTRAINTS REQUIRED AT THE FOLLOWING LOCATIONS:
STA 12+48
STA 13+25

THRUST BLOCKS
NOT TO SCALE

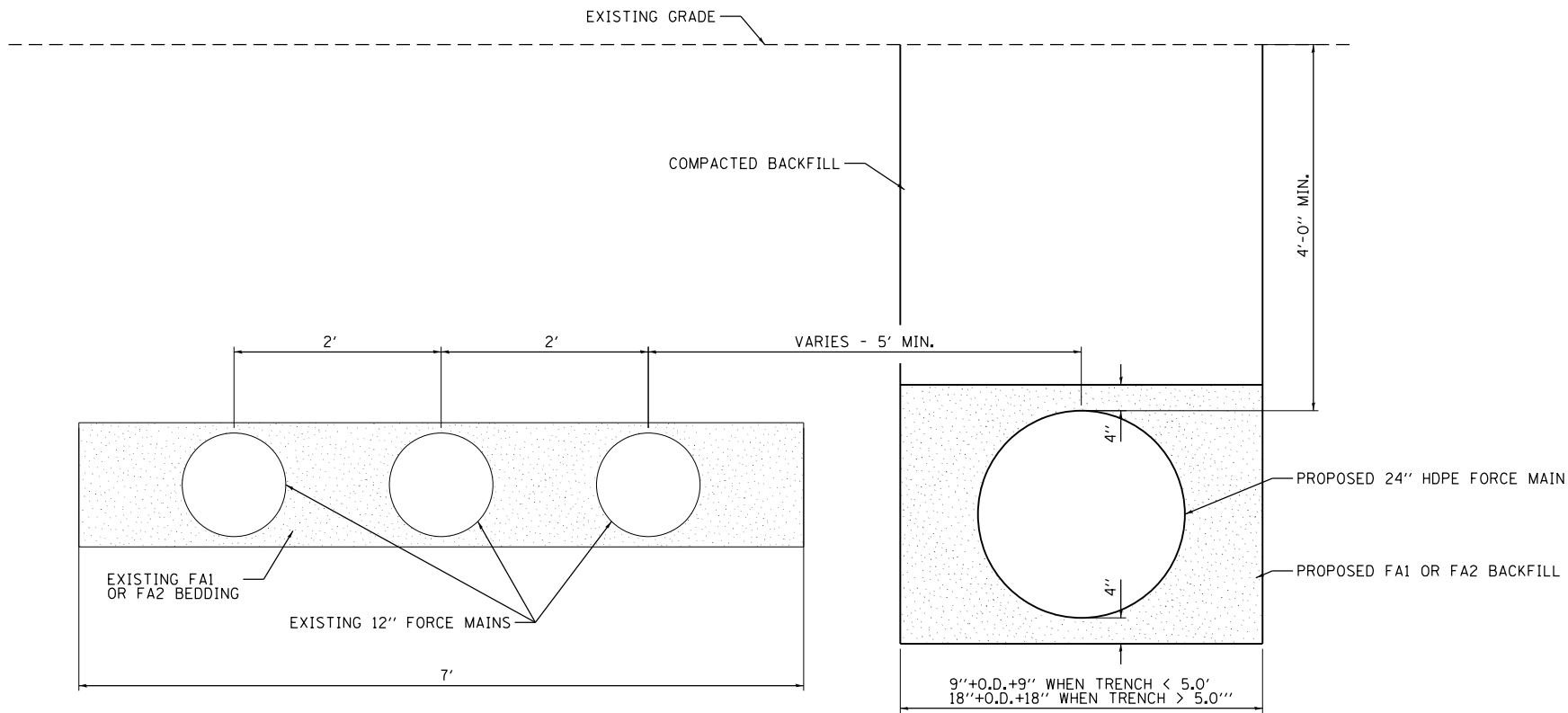
DIAMETER OF PIPE, "D" INCHES	MINIMUM BEARING SURFACE (sf)				
	BENDS				TEES AND DEAD ENDS
	11 1/4°	22 1/2°	45°	90°	
4	1	1	2	4	3
6	1	2	4	8	6
8	2	4	7	14	10
10	3	6	11	21	15
12	4	8	16	29	21
14	5	11	21	39	28
16	7	14	27	50	36
18	9	17	34	63	45
20	11	21	42	78	55
24	15	31	60	111	78
30	24	47	92	171	120
36	34	67	132	244	173

MINIMUM SURFACE AREA BASED ON WATER PRESSURE OF 150 PSI AND ALLOWABLE SOIL PRESSURE OF 1,000 PSF.

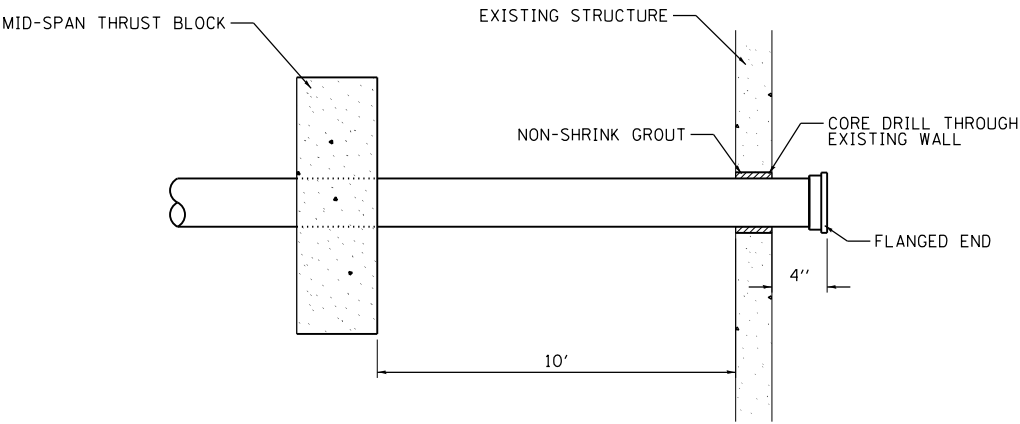
EXTEND THRUST BLOCKS TO UNDISTURBED SOIL.
EXCAVATION INTO TRENCH WALL MAY BE NECESSARY.

FORM VERTICAL SURFACES OF POURED CONCRETE THRUST
BLOCKS EXCEPT ON BEARING SURFACE.

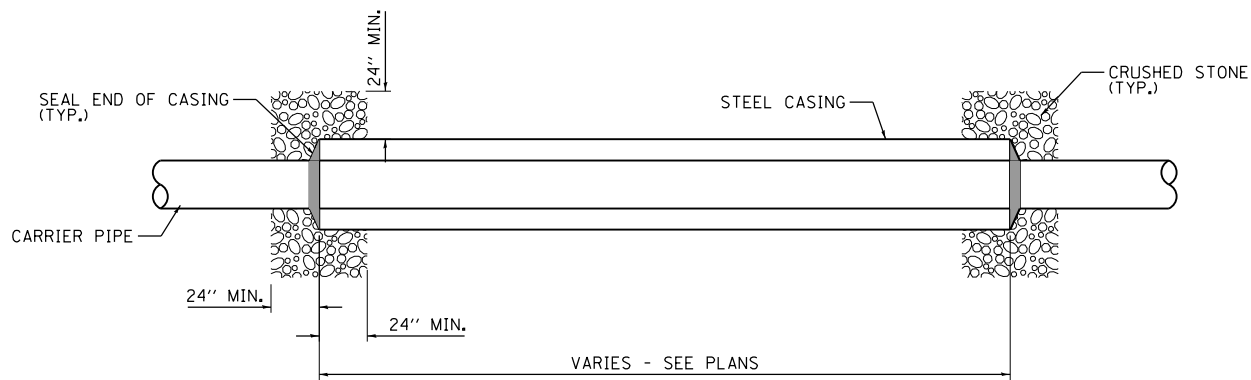
ENCASE ALL FITTINGS IN POLYETHYLENE WRAP.
DO NOT ALLOW CONCRETE TO DIRECTLY CONTACT JOINTS OR FITTING BOLTS.



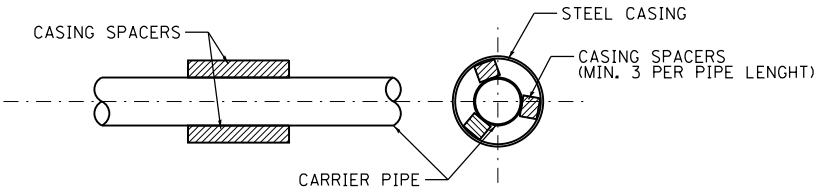
TYPICAL 24" FORCE MAIN SECTION
NOT TO SCALE



HPDE PIPE TO EXISTING STRUCTURE DETAIL
NOT TO SCALE



TYPICAL STEEL CASING DETAIL
NOT TO SCALE



CASING SPACER DETAIL
NOT TO SCALE

FILE NAME = G:\11\Files\110023\Work Order 6\CADD Sheets\0876099-sht-misc.dgn

KLINGNER & ASSOCIATES, P.C. Engineers • Architects • Surveyors	USER NAME = seb	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	MISCELLANEOUS DETAILS – FORCE MAIN MISSOURI AVENUE DEEP WELL FACILITY	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 0.1667' / 1" =	DRAWN -	REVISED -			55/70/64	82-4T-1	ST. CLAIR	185	60
	PLOT DATE = 1/14/2015	CHECKED -	REVISED -			CONTRACT NO. 76099				
		DATE -	REVISED -			ILLINOIS FED. AID PROJECT				
SCALE:		SHEET	OF	SHEETS	STA.	TO STA.				

Technical drawing of a bridge deck cross-section. The drawing shows a central vertical support structure with two main horizontal beams extending from it. The total width of the deck is 4'-0". The distance between the centers of the two main beams is 24". The height of the central support structure is 12 1/4". The thickness of the top deck slab is 1 1/2". The thickness of the bottom deck slab is 1 1/2". The distance from the centerline to the outer edge of the top slab is 20 7/8". The distance from the centerline to the outer edge of the bottom slab is 2". The distance from the centerline to the center of the main beam is 22 3/4". The distance from the centerline to the center of the main beam is 22 3/4". The distance from the centerline to the center of the main beam is 22 3/4".

THREE 5/8 X 2 1/2 (M16 X 64)
GALV. HEX. HEAD BOLT & NUT
WITH GALV. WASHERS.

Technical drawing of a window frame cross-section. The drawing shows a vertical frame with a central opening. Dimensions are indicated in inches. The total height of the frame is 24". The height of the opening is 26 1/2". The width of the frame is 10" & VAR. The frame is composed of several parts, including a top rail, a bottom rail, and side rails. The top rail is 1" thick. The bottom rail is 2" thick. The side rails are 1" thick. The frame is shown with a cross-section of the glass and a cross-section of the frame material. The frame is labeled with dimensions and notes.

24"

12"

1"

1 1/2"

1"

2"

5/8" (TYP.)

10" & VAR.

3/4" (TYP.)

9" (TYP.)

26 1/2"

3/4" DIA. HOLES, THREE PLACES EACH FRAME.

CURB AND GUTTER TRANSITION DETAILS

EXIST. EOP

STA. 123+85

PR GUTTER IF

PR BACK OF CURB

STA. 123+68

EX SAG INLETS

STA. 123+99.75

STA. 124+25

STA. 124+12.42

STA. 124+42

Dimensions:

- 8'-0"
- 8'-0"
- 2'
- 6'-10 1/2"
- 6'-10 1/2"
- 5'-9 1/2"
- 5'-9 1/2"
- 2'
- 8'-0"
- 8'-0"

EXIST. SHOULDER
S.E. RATE = $\pm 7.27\%$

ROLLED
EDGE

$\pm 11\frac{1}{2}''$

6"

$\pm 12''$ $\pm 9''$

4"

TIE BARS
@ 24" CTS.

MATCH INTO EX
CURB CONFIG.

EXIST. SHOULDER
S.E. RATE = $\pm 7.27\%$

ROLLED
EDGE

4 1/4"

3"

6"

12"

$\pm 2'-5"$

4"

TIE BARS
@ 24" CTS.

EXIST. SHOULDER
S.E. RATE = $\pm 7.27\%$

ROLLED
EDGE

$\pm 3''$

$6''$

$4\frac{1}{4}''$

$12''$

$\pm 2'-3\frac{3}{4}''$

Δ

TIE BARS
@ 24" CTS.

Diagram illustrating the cross-section of a bridge deck with dimensions and tolerances:

- EXIST. SHOULDER S.E. RATE = $\pm 7.27\%$**
- ROLLED EDGE**
- 6"** (Shoulder width)
- 4/4"** (Deck thickness)
- 12"** (Deck width from edge to centerline)
- $\pm 2'-6"$** (Span length)
- TIE BARS @ 24" CTS.**

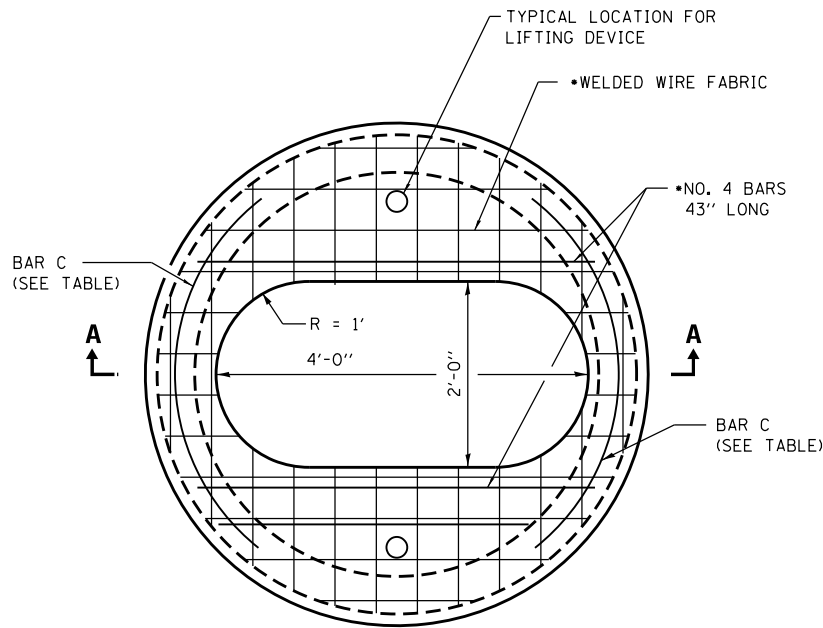
Technical drawing of a catch basin. The drawing shows a cross-section of the basin with the following dimensions and labels:

- ROLLED EDGE**: Label pointing to the top left corner of the basin wall.
- 12"**: Dimension for the top left corner radius.
- 4'-0"**: Dimension for the top right corner radius.
- EXIST. SHOULDER**: Label pointing to the top right corner of the basin wall.
- S.E. RATE = $\pm 7.27\%$** : Label indicating the slope rate.
- 4 1/2"**: Dimension for the top right corner radius.
- 6"**: Dimension for the top right corner radius.
- 5' Ø CATCH BASIN**: Dimension for the diameter of the catch basin.

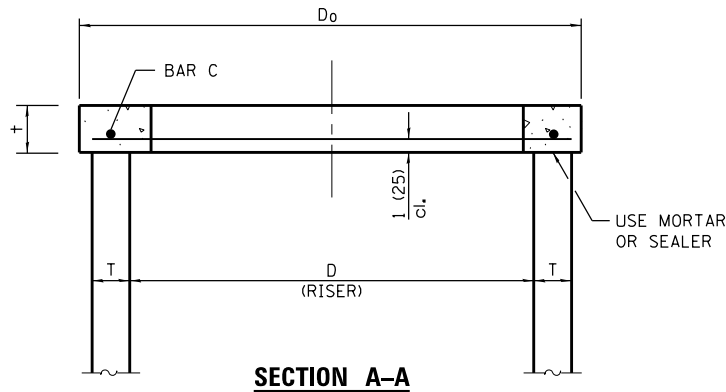
Diagram illustrating the installation of a catch basin. The catch basin is shown with a 24" width and a 5' Ø (diameter) catch basin. The diagram also indicates a 5' Ø catch basin and a 5' Ø catch basin.

MISCELLANEOUS DETAILS – DRAINAGE MISSOURI AVENUE DEEP WELL FACILITY				F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
				55/70/64	82-4T-1	ST. CLAIR	185	61
				CONTRACT NO. 76G99				
SCALE: N/A	SHEET 1 OF 1 SHEETS	STA. TO STA.		ILLINOIS FED. AID PROJECT				

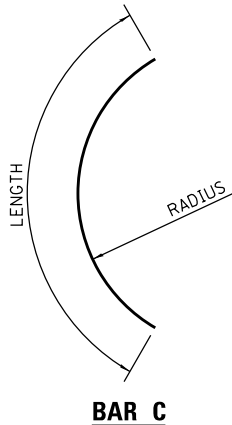
FLAT SLAB TOP DETAIL



• PRECAST CONCRETE MANUFACTURER SHOULD BE CONSULTED REGARDING THE PLACEMENT AND SIZE OF THE REINFORCEMENT.

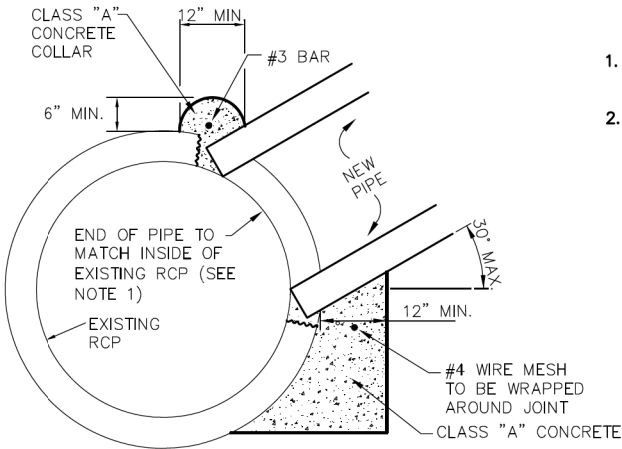


SECTION A-A



TABLE

D	T	D ₀ (min.)	+	Reinforcement		No. 4 Bar C	
				"A _s " W.W.F. each direction	OR Bar size	Length	Radius
36	See applicable Standards	D + 2T	6	0.20 sq. in./ft.	No. 4	4'-0"	19
4'-0"			6	0.35 sq. in./ft.	No. 5	4'-6"	26
5'-0"			8	0.35 sq. in./ft.	No. 5	5'-0"	32



- NOTES:**
1. MAXIMUM DIAMETER OF NEW PIPE EQUALS ONE HALF OF EXISTING PIPE'S DIAMETER.
 2. REMOVAL OF PLUG FROM EXISTING RCP TO BE ACCOMPLISHED BY USING A MASONRY DRILL AT A SPACING EQUAL TO THE DRILL BIT DIAMETER IN A CIRCULAR PATTERN OR A MASONRY SAW IN AN OCTAGONAL PATTERN PER DETAIL.

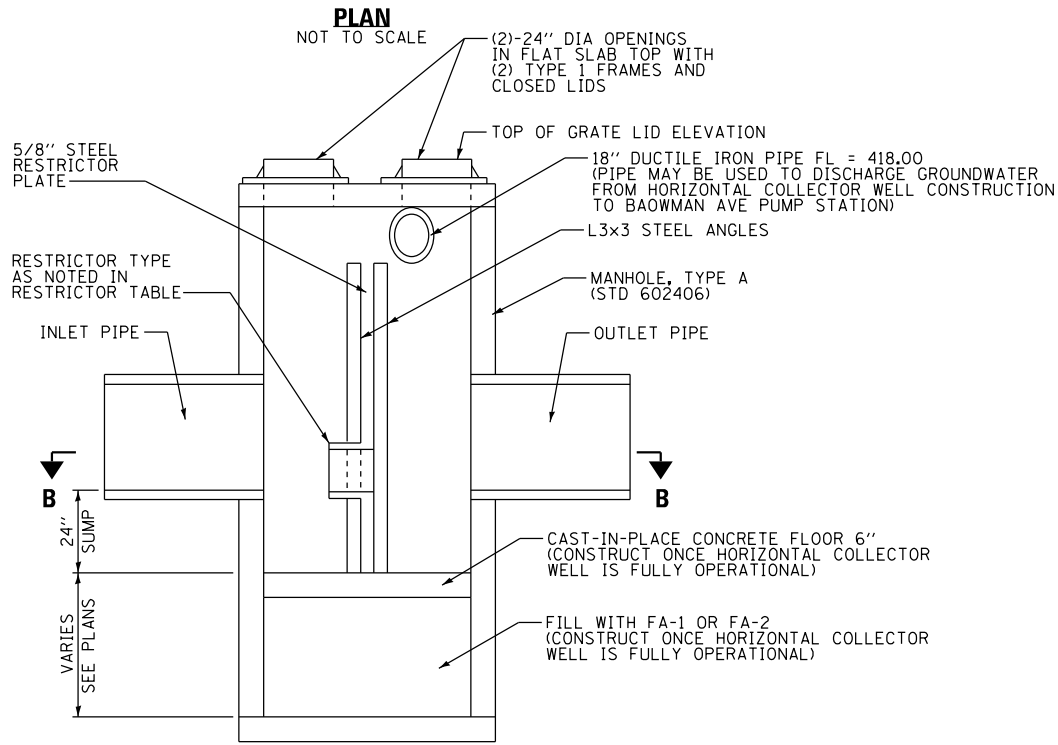
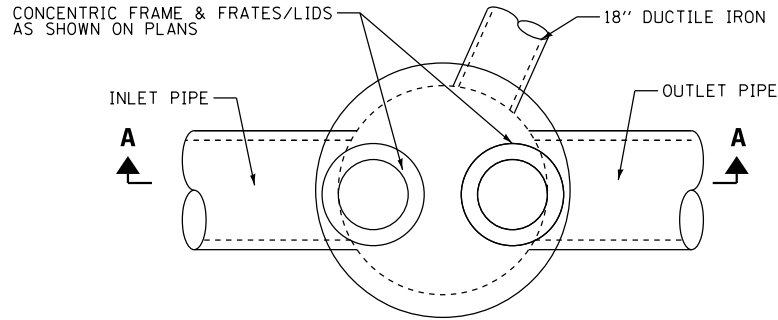


CONNECTION TO EXISTING RCP 90" STORM SEWER

IDOT HWY STD.
602001-02 CATCH BASIN TYPE A
602701-02 MANHOLE STEPS

FILE NAME = G:\11\Files\110023\Work Order 6\CADD Sheets\0376099-sht-misc.dgn

FILE NAME = G:\115\110023\Work Order 6\CADD Sheets\0376099-sh-t-Manhole RestrictorPlan.dgn

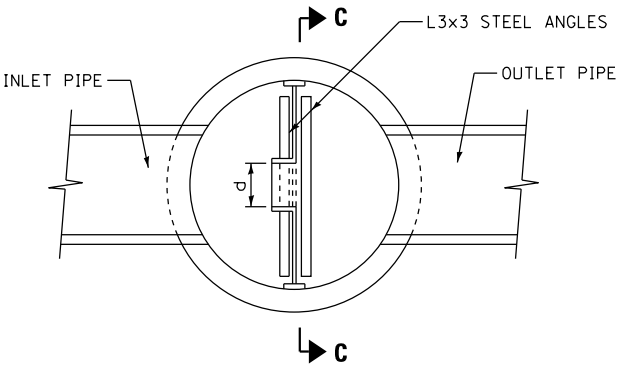


SECTION A-A
NOT TO SCALE

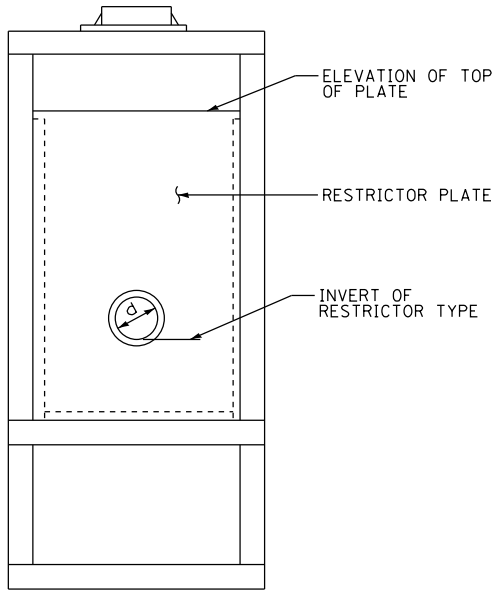
THE CONTRACTOR MAY USE THE 18" CAST IRON PIPE AND THE FULL DEPTH OF THE MANHOLE TO DISCHARGE GROUNDWATER FROM THE CONSTRUCTION OF THE HORIZONTAL COLLECTOR WELL TO THE BOWMAN AVENUE PUMP STATION.

ONCE THE HORIZONTAL COLLECTOR WELL IS OPERATIONAL, THE RESTRICTOR PLATE AND FALSE CONCRETE FLOOR SHALL BE CONSTRUCTED.

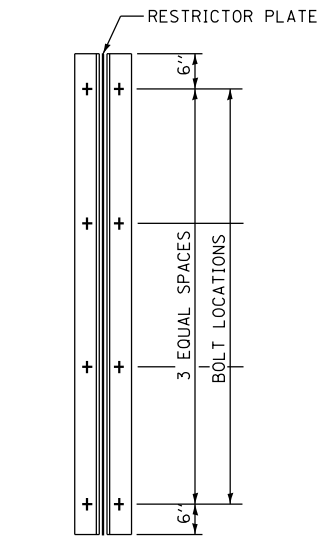
CALL OUT	MANHOLE DIAMETER	FRAME AND FRATE	RESTRICTOR TYPE	INSIDE RESTRICTOR TYPE DIAMETER INCHES (d)	INVERT OF RESTRICTOR TYPE	ELEVATION OF TOP OF PLATE OVERFLOW
A3	7'	TY 1	1	12"	412.00	418.00



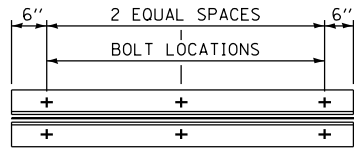
SECTION B-B
NOT TO SCALE



SECTION C-C
NOT TO SCALE



TYPICAL VERTICAL ANGLES LOOKING TOWARD MANHOLE WALL



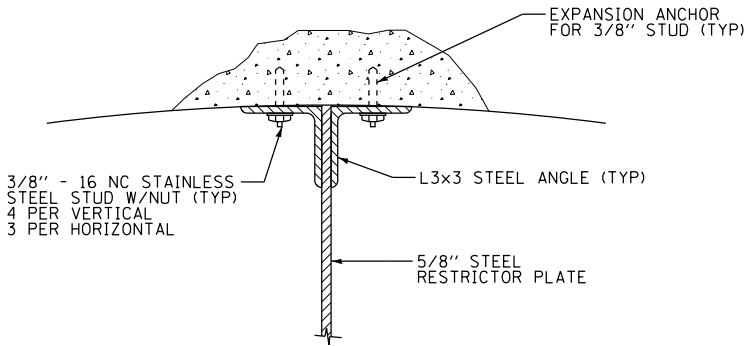
TYPICAL HORIZONTAL ANGLES LOOKING TOWARD BOTTOM OF MANHOLE

TOTAL BOLTS REQUIRED: (22)

NOTE:

- ANGLES SHOULD BE 3x3x 3/8
- VERTICAL ANGLES SHOULD EXTEND FROM BOTTOM OF THE RESTRICTOR PLATE TO THE TOP.
- HORIZONTAL ANGLES SHOULD EXTEND FROM ANGLE TO VERTICAL ANGLE.

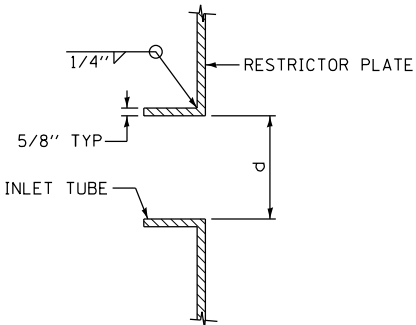
STEEL ANGLE BOLTING DETAILS
NOT TO SCALE



ANGLE FASTENER DETAIL
NOT TO SCALE

NOTES:

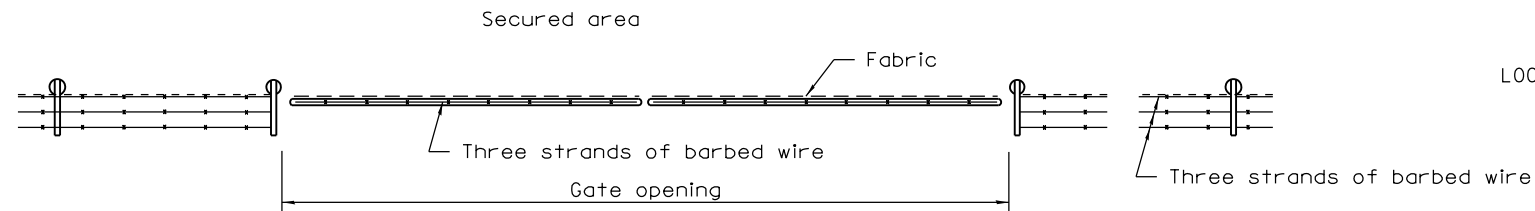
- ALL STEEL ANGLES AND PLATES TO BE GALVANIZED AFTER FABRICATION.
- ALL RESTRICTOR PLATES, ANGLES AND HARDWARE TO BE INCLUDED IN THE COST OF THE MANHOLE.
- BASIS OF PAYMENT: "MANHOLES, TYPE A, 6 FT.-DIAMETER, TYPE 1 FRAME, CLOSED LID, RESTRICTOR PLATE" EACH



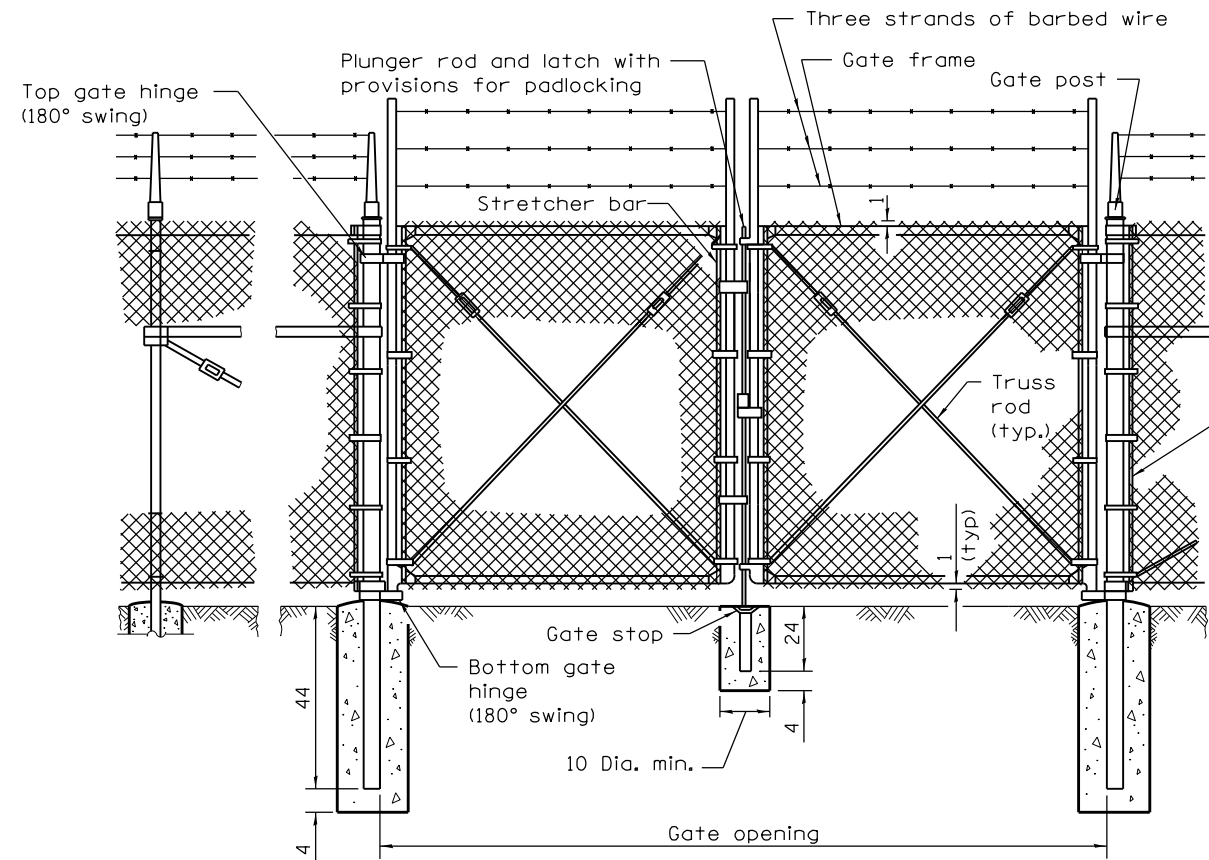
INLET TUBE DETAIL
NOT TO SCALE

RESTRICTOR TYPE					
1	2	3	4	5	6
RE-ENTRANT TUBE	SHARP EDGED	SQUARE EDGED	RE-ENTRANT TUBE	SQUARE EDGED	ROUNDED
LENGTH: 1/2 TO 1 DIA		STREAM CLEARS SIDES	LENGTH: 2-1/2 DIA	LENGTH: 2-1/2 DIA	
C=.52	C=.61	C=.61	C=.73	C=.82	C=.98

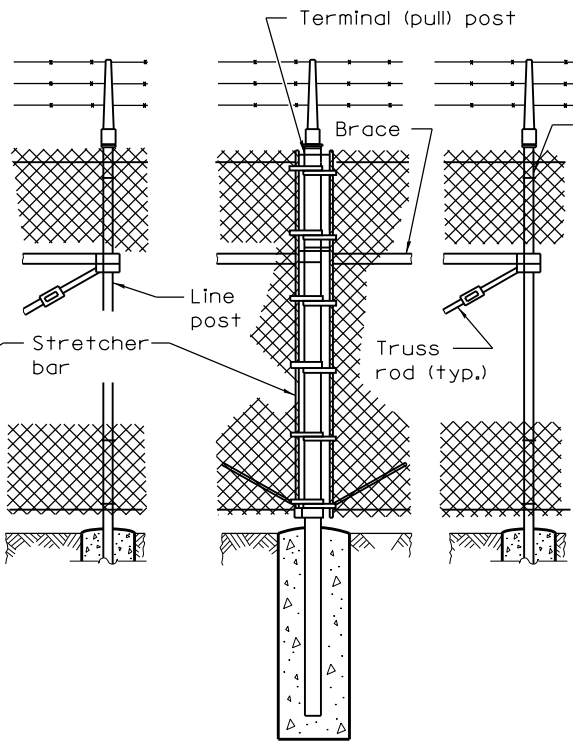
VALUES OF "C" FOR CIRCULAR AND SQUARE ORIFICES



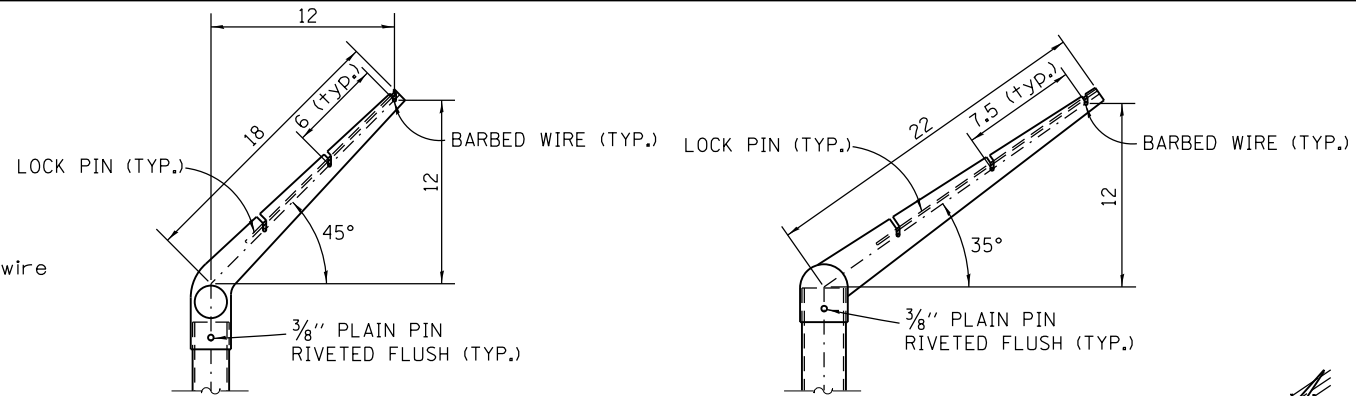
PLAN
NTS



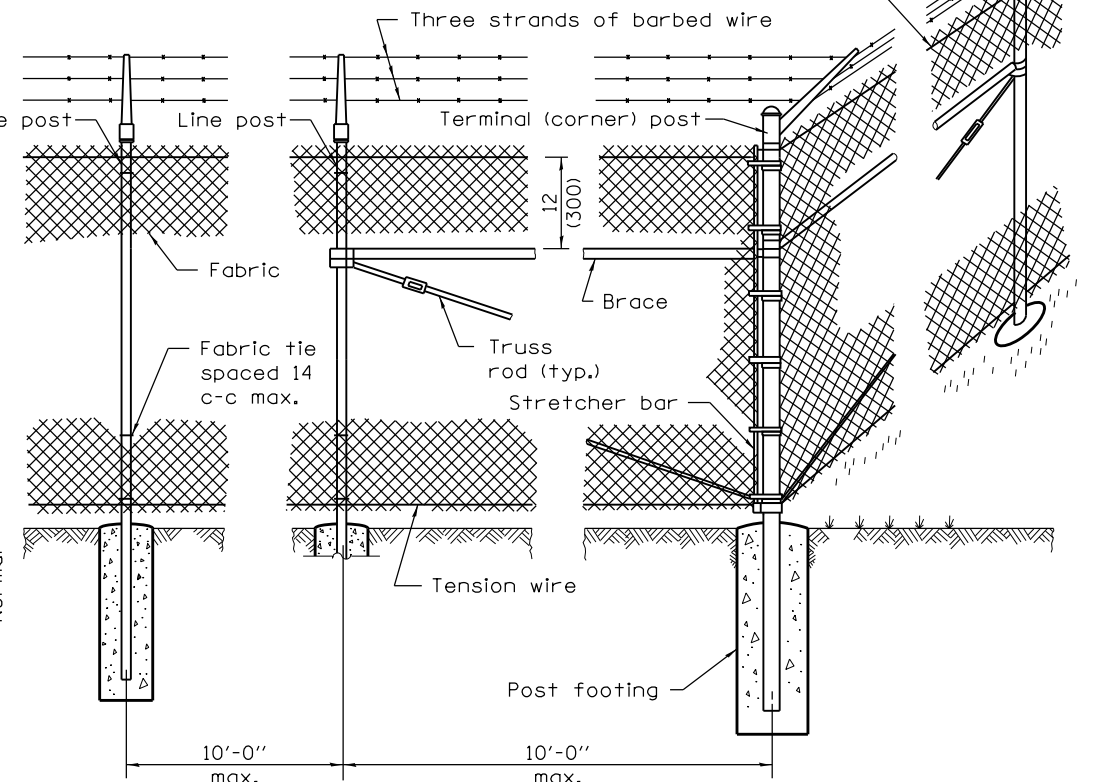
VEHICLE GATE ARRANGEMENT



PULL POST ARRANGEMENT

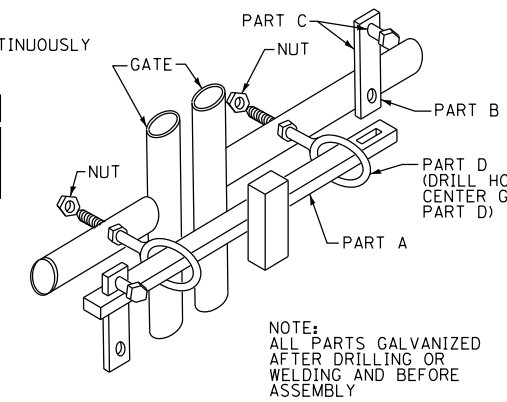
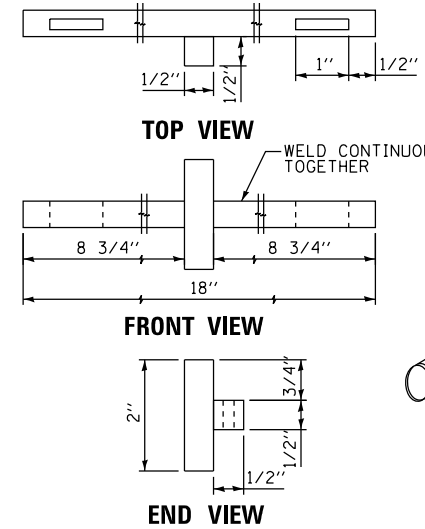


LINE POST EXTENSION ARM DETAILS CORNER POST
NTS

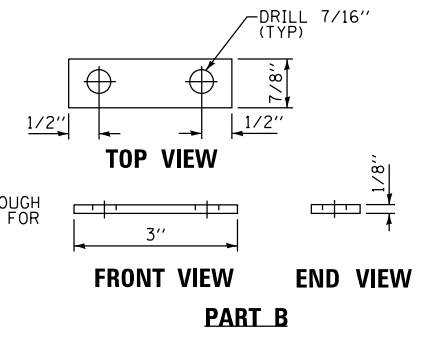


LINE POST ARRANGEMENT

CORNER OR END POST ARRANGEMENT



SWING GATE LOCKING DEVICE
NTS



PART C IS FABRICATED THE SAME WITH A BOLT INTO EACH HOLE

PART C

ELEVATION
NTS

* On uneven ground this dimension may vary between 1 min. to 5 max. for a max. distance of 8'-0".

GENERAL NOTES

See Highway Standard 664001-02 for additional chain link fence and gate details.

All dimensions are in inches unless otherwise shown.

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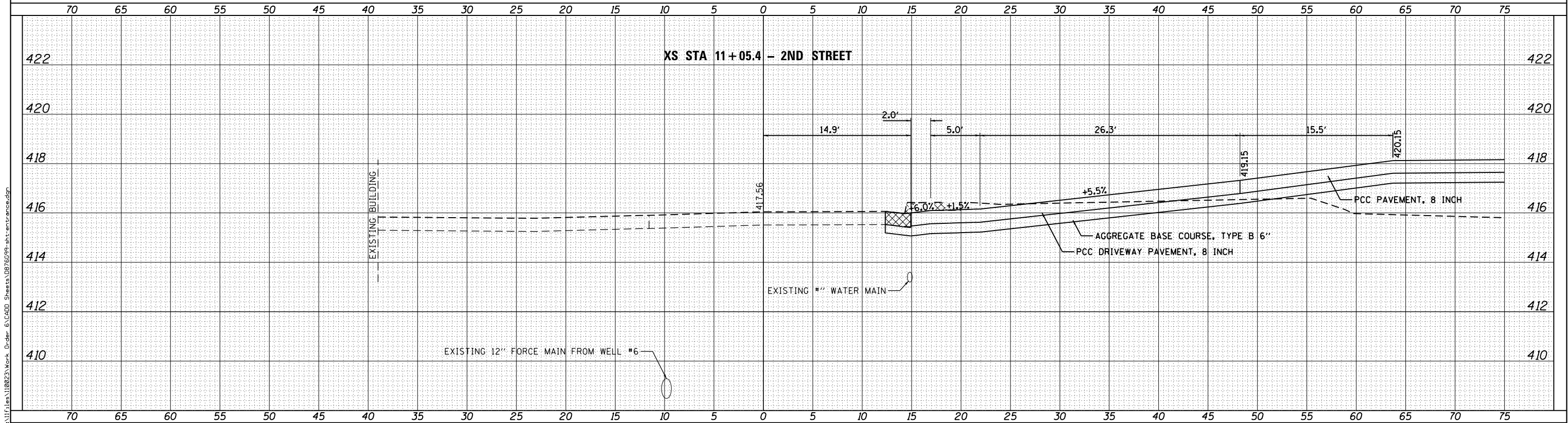
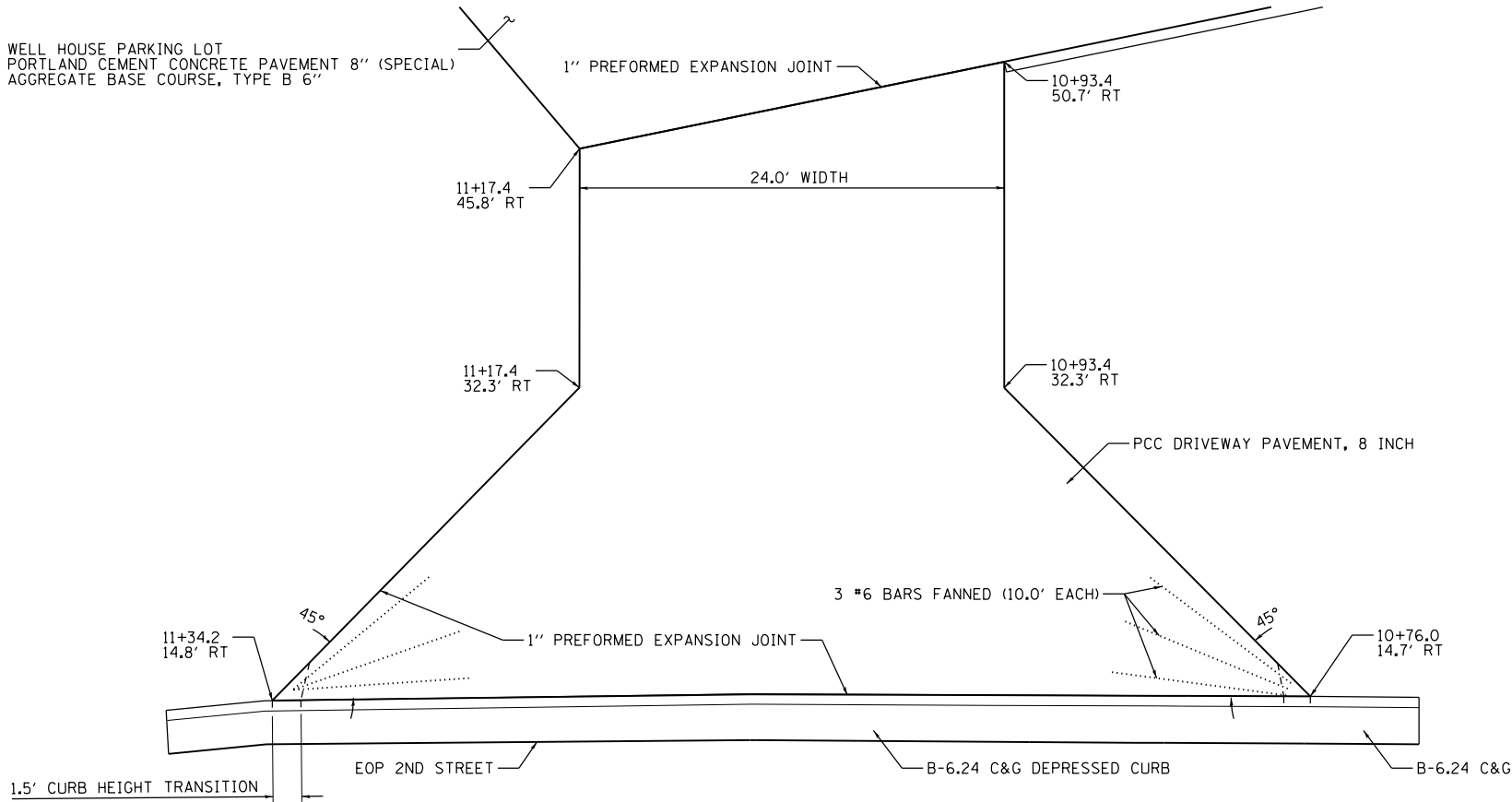
KLINGNER & ASSOCIATES, P.C.
Engineers • Architects • Surveyors

USER NAME = bgj	DESIGNED -	REVISED -
PLOT SCALE = 20.0000' / in.	DRAWN -	REVISED -
PLOT DATE = 1/13/2015	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

CHAIN LINK FENCE DETAILS			
MISSOURI AVENUE DEEP WELL FACILITY			
SCALE:	SHEET	OF SHEETS	STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55/70/64	82-4T-1	ST. CLAIR	185	64
CONTRACT NO. 76099				
ILLINOIS FED. AID PROJECT				

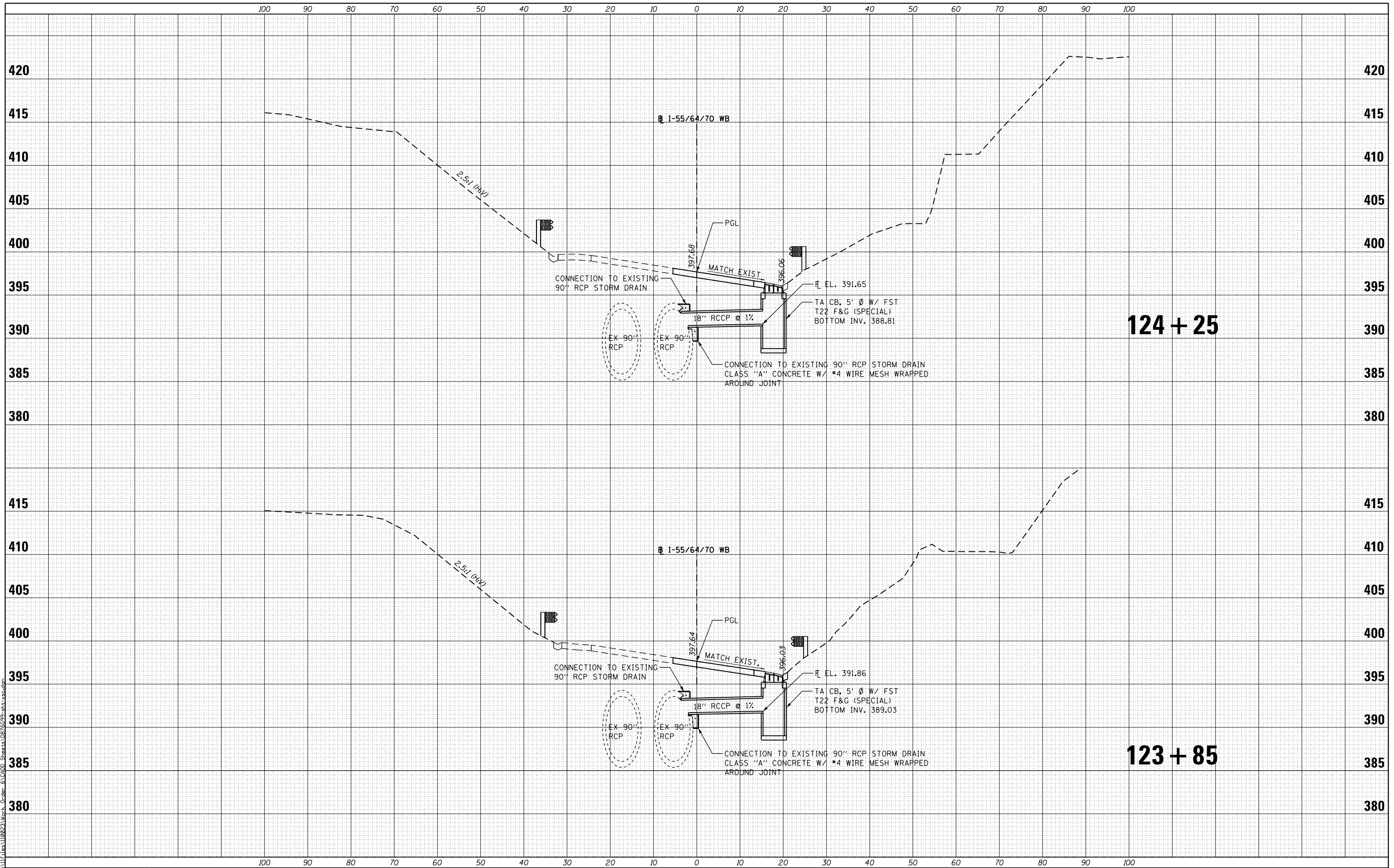


FILE NAME = KLINGNER & ASSOCIATES, P.C. Engineers • Architects • Surveyors	USER NAME = bgj	DESIGNED - SEB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	ENTRANCE STA 11+05.4 DETAILS MISSOURI AVENUE DEEP WELL FACILITY			F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 10.0000' / in.	DRAWN - SEB	REVISED -					55/70/64	82-4T-1	ST. CLAIR	185	65
	PLOT DATE = 1/13/2015	CHECKED -	REVISED -		SCALE: 1"=5'		SHEET 1 OF 1 SHEETS	STA.	TO STA.	CONTRACT NO. 76699		
		DATE -	REVISED -						ILLINOIS FED. AID PROJECT			

FINAL SURVEY		BY	DATE
SURVEYED			
PLOTTED			
NOTE BOOK			
TEMPLATE			
AREAS			
AREAS CHECKED			
NO.			

ORIGINAL			BY	DATE
SURVEY	SURVEYED			
	PLOTTED			
NOTE BOOK	TEMPLATE			
	AREAS			
	AREAS CHECKED			
NO.	NO.			

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LIN ENGINEERING, LTD.
Consulting Engineers
Springfield, Illinois

USER NAME = bgj	DESIGNED - SEL	REVISED -
	DRAWN - SEL	REVISED -
PLOT SCALE = 200000:15'Hin.	CHECKED -	REVISED -
PLOT DATE = 1/13/2015	DATE - 7/1/2014	REVISED -

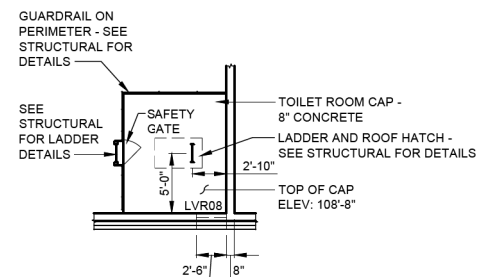
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

CROSS SECTIONS
MISSOURI AVENUE DEEP WELL FACILITY

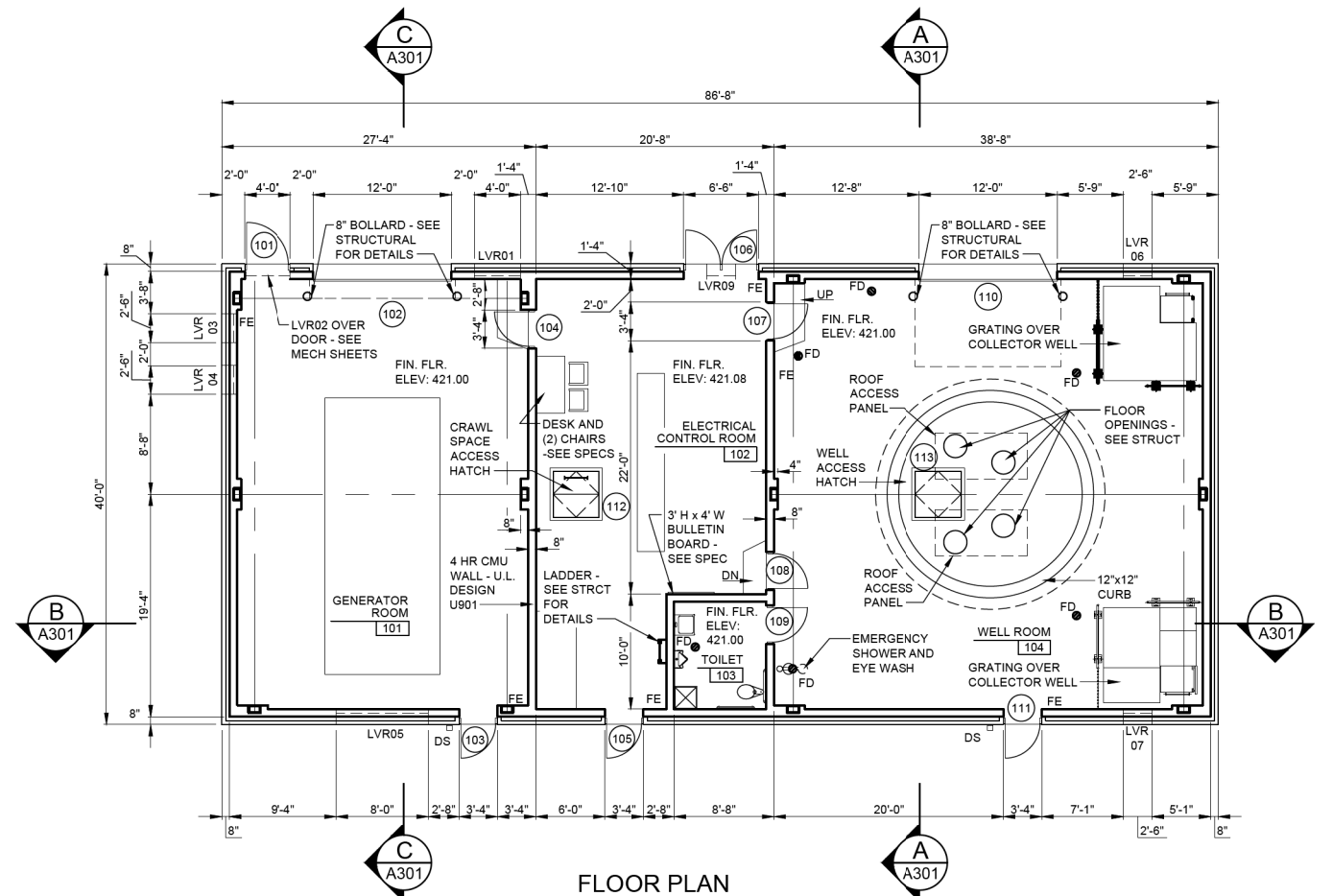
SCALE: 1"=10'(H)5'(V)	SHEET 1 OF 1 SHEETS	STA. 123+85 TO STA. 124+25
-----------------------	---------------------	----------------------------

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55/70/64	82-4T-1	ST. CLAIR	185	66
CONTRACT NO. 76C99				
ILLINOIS FED. AID PROJECT				

FILE NAME = Q:\files\110023\Work Order 6\CADD Sheets\D876099-sht-KLA Arch1.dgn



MEZZANINE PLAN
SCALE: 1/8" = 1'-0"



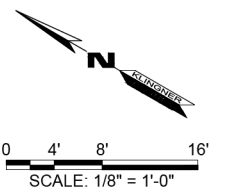
FLOOR PLAN
SCALE: 1/8" = 1'-0"

ABBREVIATIONS

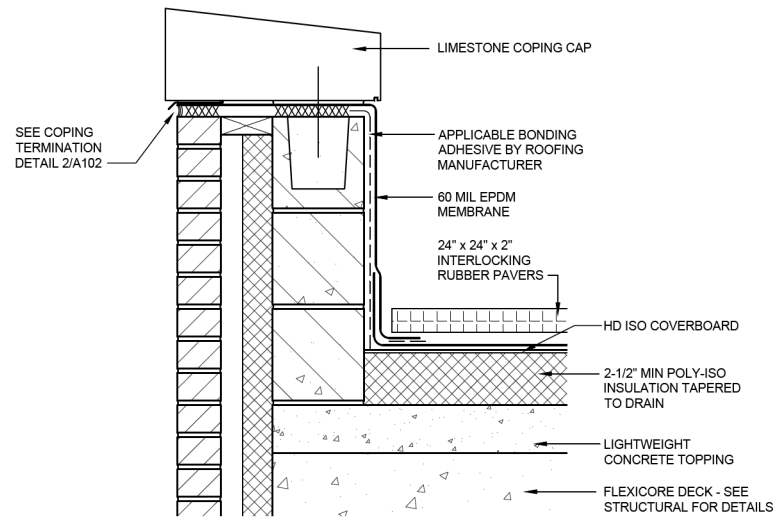
ALUM	ALUMINUM
CMU	CONCRETE MASONRY UNIT
CONC	CONCRETE
DS	DOWN SPOUT
FD	FLOOR DRAIN
FE	FIRE EXTINGUISHER - MOUNT 3'-10" TO TOP
FRP	FIBERGLASS REINFORCED POLYMER
LVR	LOUVER - SEE MECHANICAL SHEETS FOR SCHEDULE
STL	STEEL (HOT DIP GALVANIZED)

GENERAL NOTES

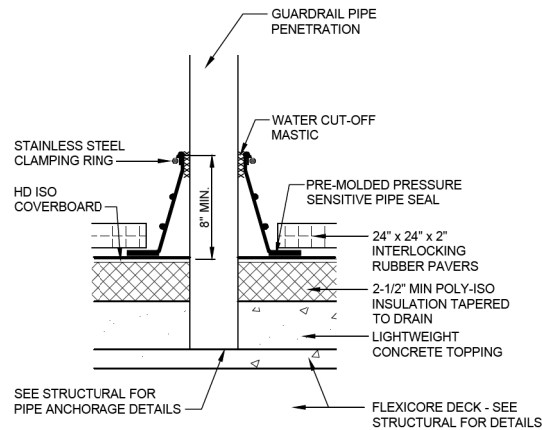
- 1.) CONTRACTOR SHALL FIELD VERIFY ALL EXISTING SITE CONDITIONS, INCLUDING SITE ACCESS, POWER SUPPLY, AND ANY OTHER ITEMS THAT AFFECT THE CONTRACT AND THE CONSTRUCTION OF THE IMPROVEMENT.



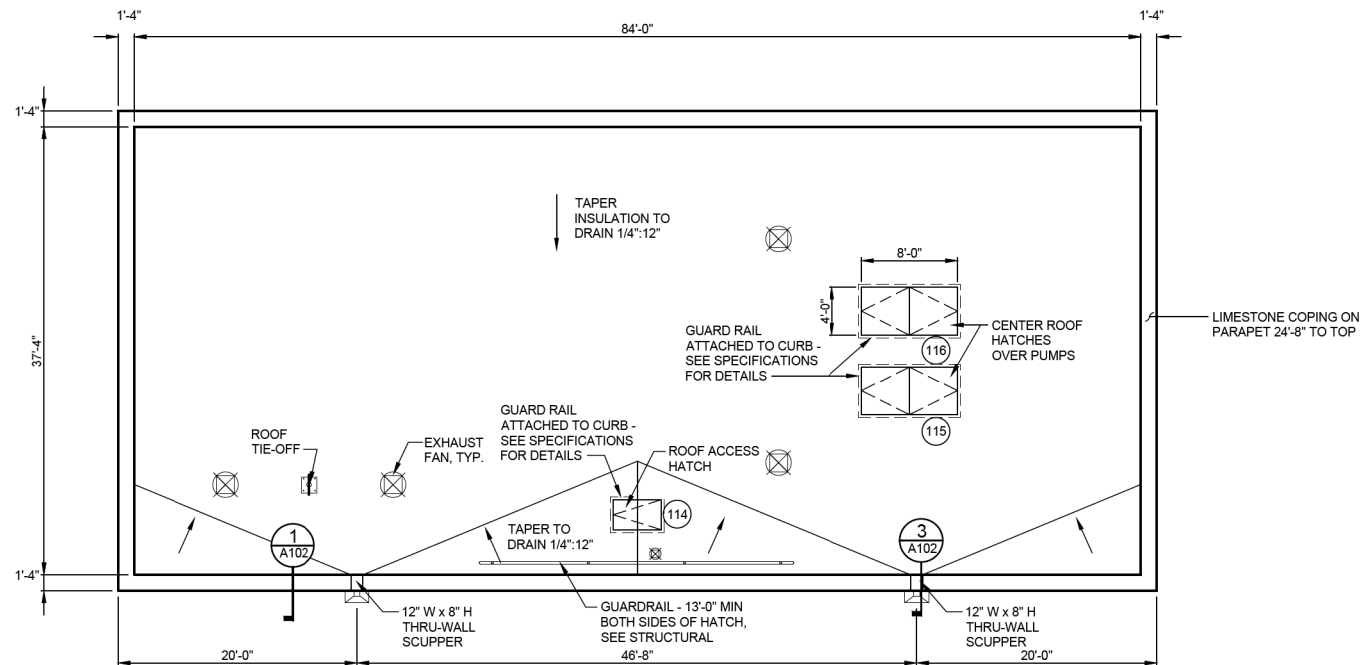
 KLINGNER & ASSOCIATES, P.C. Engineers • Architects • Surveyors	USER NAME = b9j	DESIGNED - DEN	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	WELL HOUSE BUILDING - FLOOR PLAN MISSOURI AVENUE DEEP WELL FACILITY			F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 40.0000' / in.	CHECKED - DEN	REVISED -					55/70/64	82-4T-1	ST. CLAIR	185	67
	PLOT DATE = 1/13/2015	DATE - 8/22/2014	REVISED -		SCALE: AS NOTED			SHEET 1 OF 8 SHEETS	STA.	TO STA.		
								ILLINOIS FED. AID PROJECT			CONTRACT NO. 76G99	



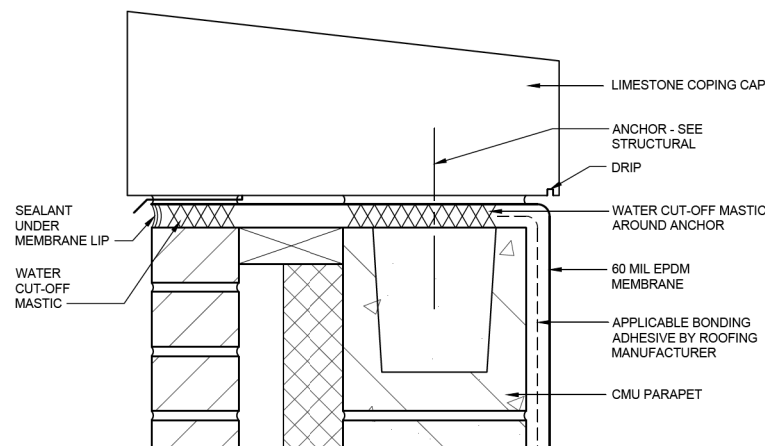
1 TYPICAL PARAPET DETAIL
A102 SCALE: 1-1/2"=1'-0"



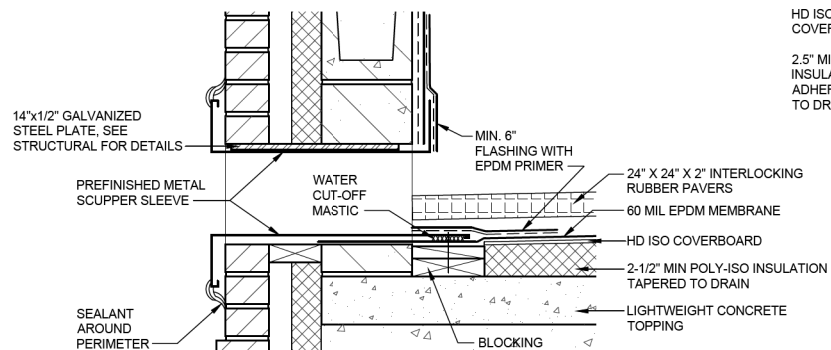
4 HANDRAIL PIPE BASE DETAIL
A102 SCALE: 1-1/2"=1'-0"



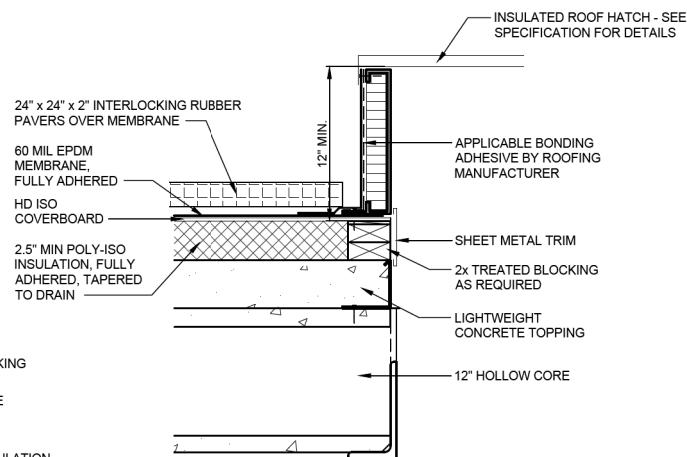
ROOF PLAN
SCALE: 1/8" = 1'-0"



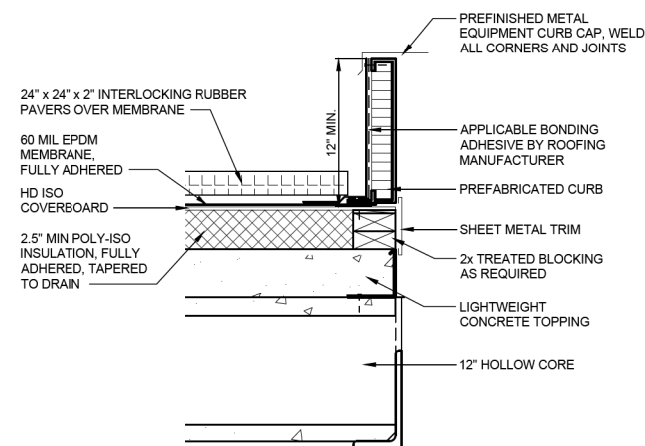
2 COPING TERMINATION DETAIL
A102 SCALE: 3"=1'-0"



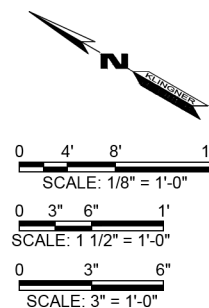
3 SCUPPER DETAIL
A102 SCALE: 1-1/2"=1'-0"



5 TYPICAL ROOF HATCH DETAIL
A102 SCALE: 1-1/2"=1'-0"



6 TYP EQUIPMENT CURB DETAIL
A102 SCALE: 1-1/2"=1'-0"



FILE NAME = G:\115\110023\Work Order 6\CADD Sheets\0376099-sht-KL-Arch.dgn

KLINGNER & ASSOCIATES, P.C.
Engineers • Architects • Surveyors

USER NAME = bgj	DESIGNED - DEN	REVISED -
PLOT SCALE = 40.0000' / in.	DRAWN - CRC	REVISED -
PLOT DATE = 1/13/2015	CHECKED - DEN	REVISED -
	DATE - 8/22/2014	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

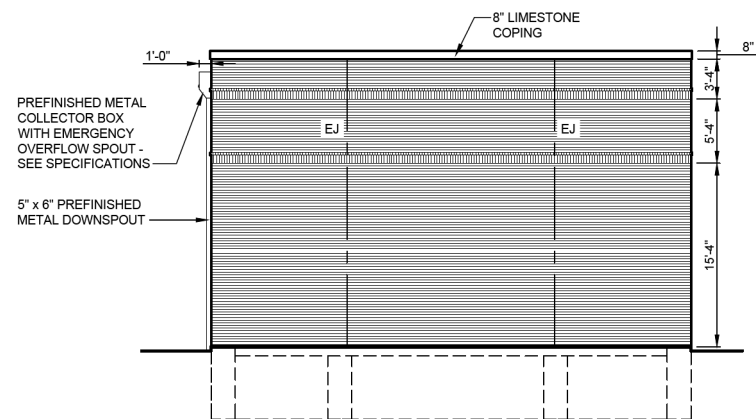
WELL HOUSE BUILDING - ROOF PLAN AND DETAILS
MISSOURI AVENUE DEEP WELL FACILITY

SCALE: AS NOTED SHEET 2 OF 8 SHEETS STA. TO STA.

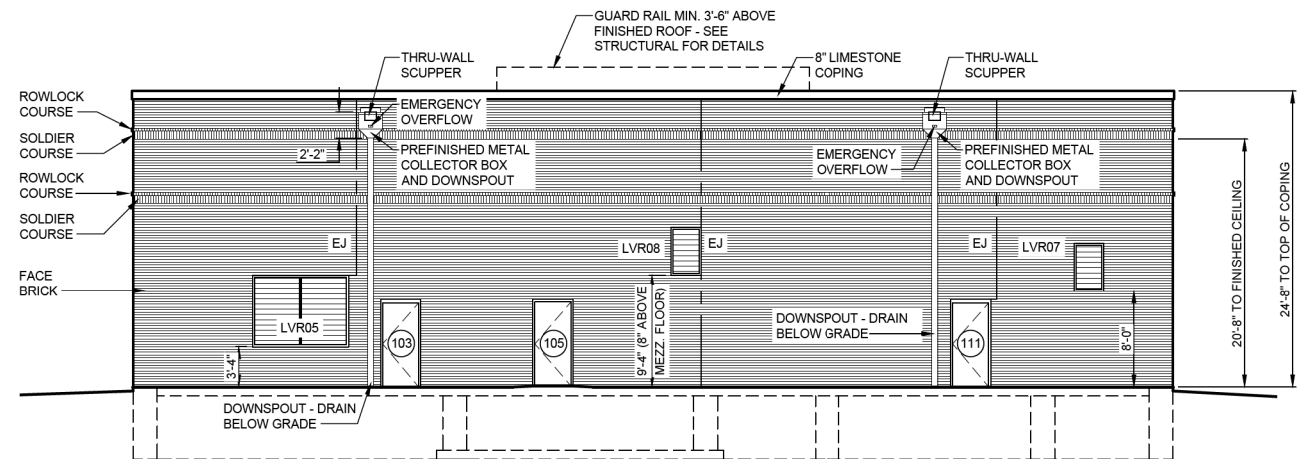
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55/70/64	82-4T-1	ST. CLAIR	185	68
CONTRACT NO. 76099				
ILLINOIS FED. AID PROJECT				

A102

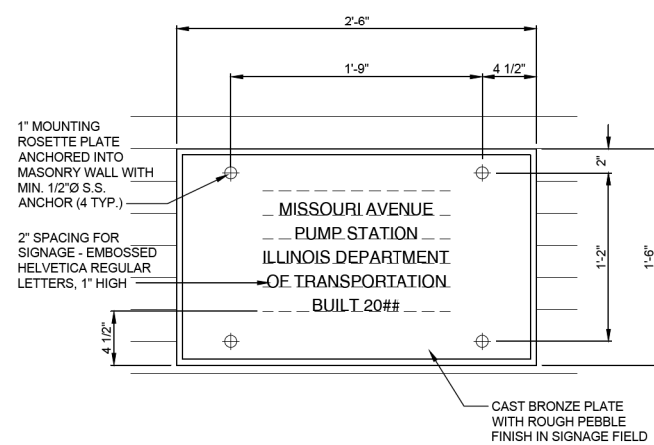
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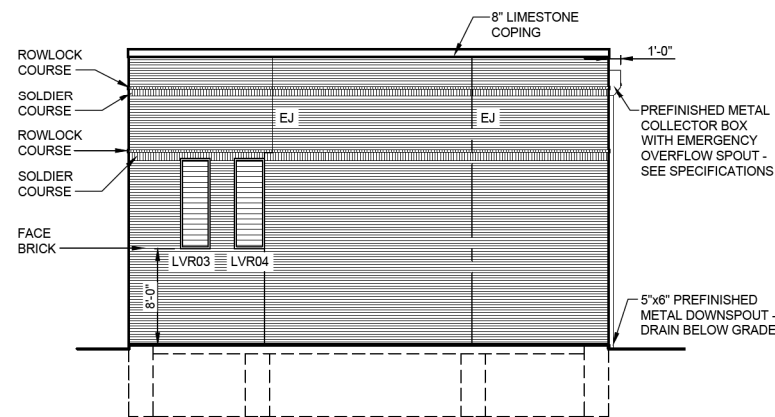
SOUTH ELEVATION
SCALE: 1/8" = 1'-0"



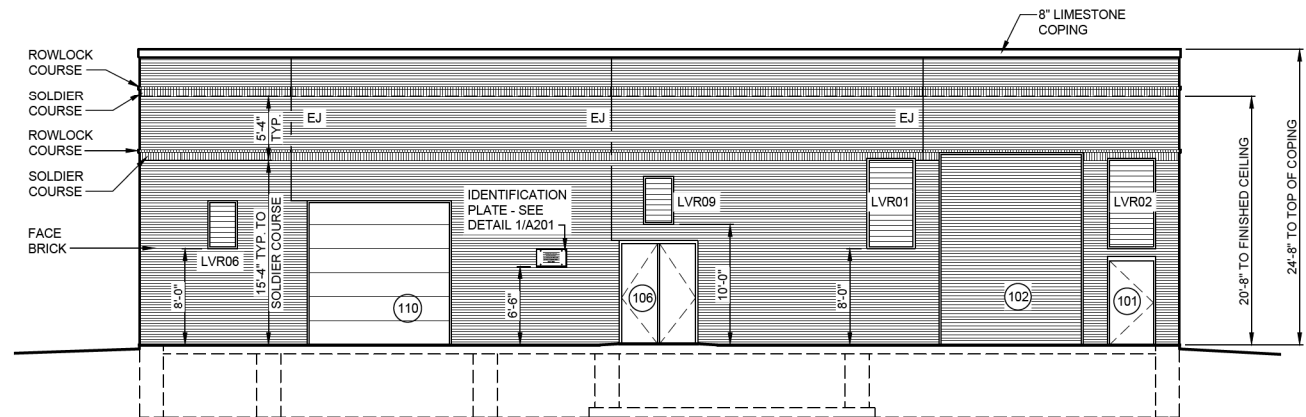
WEST ELEVATION
SCALE: 1/8" = 1'-0"



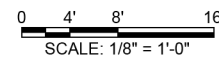
1 IDENTIFICATION PLATE
A201 SCALE: NO SCALE



NORTH ELEVATION
SCALE: 1/8" = 1'-0"

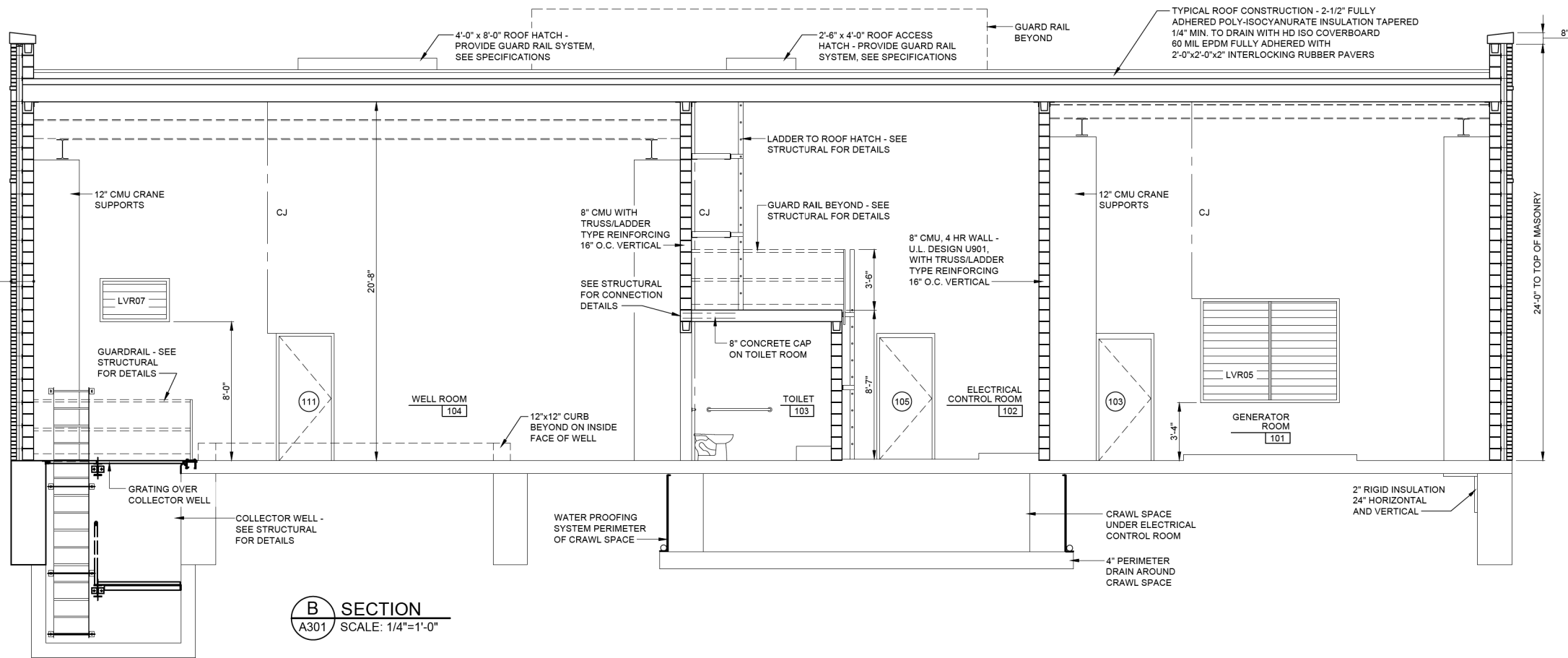


EAST ELEVATION
SCALE: 1/8" = 1'-0"

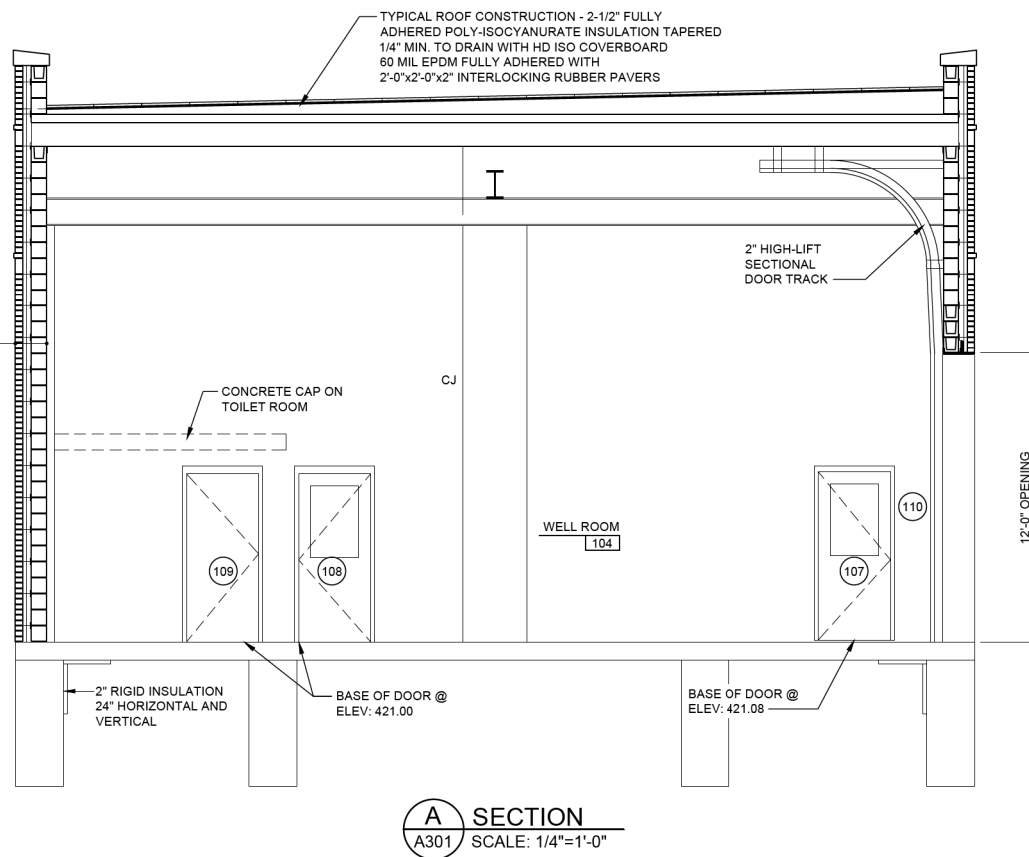


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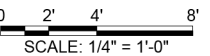
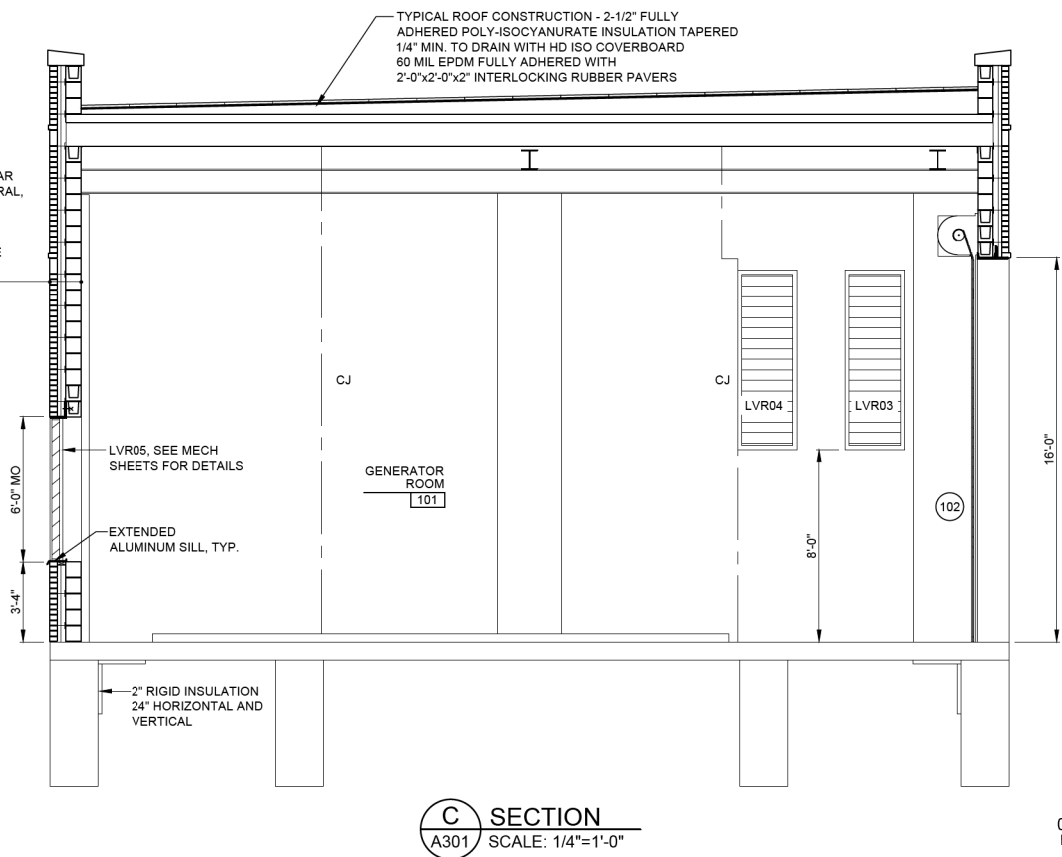
TYPICAL WALL CONSTRUCTION -
8" CMU FULLY GROUTED WITH
HORIZONTAL AND VERTICAL REBAR,
2-1/2" CONTINUOUS RIGID
INSULATION (R-11.4 MIN)
AIRSPACE
4" FACE BRICK WITH ADJUSTABLE
SEISMIC VENEER ANCHORS WITH
CONTINUOUS WIRE, SEE SPECS



TYPICAL WALL CONSTRUCTION -
8" CMU FULLY GROUTED WITH
HORIZONTAL AND VERTICAL REBAR,
2-1/2" CONTINUOUS RIGID
INSULATION (R-11.4 MIN)
AIRSPACE
4" FACE BRICK WITH ADJUSTABLE
SEISMIC VENEER ANCHORS WITH
CONTINUOUS WIRE, SEE SPECS



TYPICAL WALL CONSTRUCTION -
8" CMU FULLY GROUTED WITH
HORIZONTAL AND VERTICAL REBAR,
2-1/2" CONTINUOUS RIGID
INSULATION (R-11.4 MIN)
AIRSPACE
4" FACE BRICK WITH ADJUSTABLE
SEISMIC VENEER ANCHORS WITH
CONTINUOUS WIRE, SEE SPECS



KLINGNER
& ASSOCIATES, P.C.
Engineers • Architects • Surveyors

USER NAME = bgj	DESIGNED - DEN	REVISED -
PLOT SCALE = 40.0000' / in.	DRAWN - CRC	REVISED -
PLOT DATE = 1/13/2015	CHECKED - DEN	REVISED -
	DATE - 8/22/2014	REVISED -

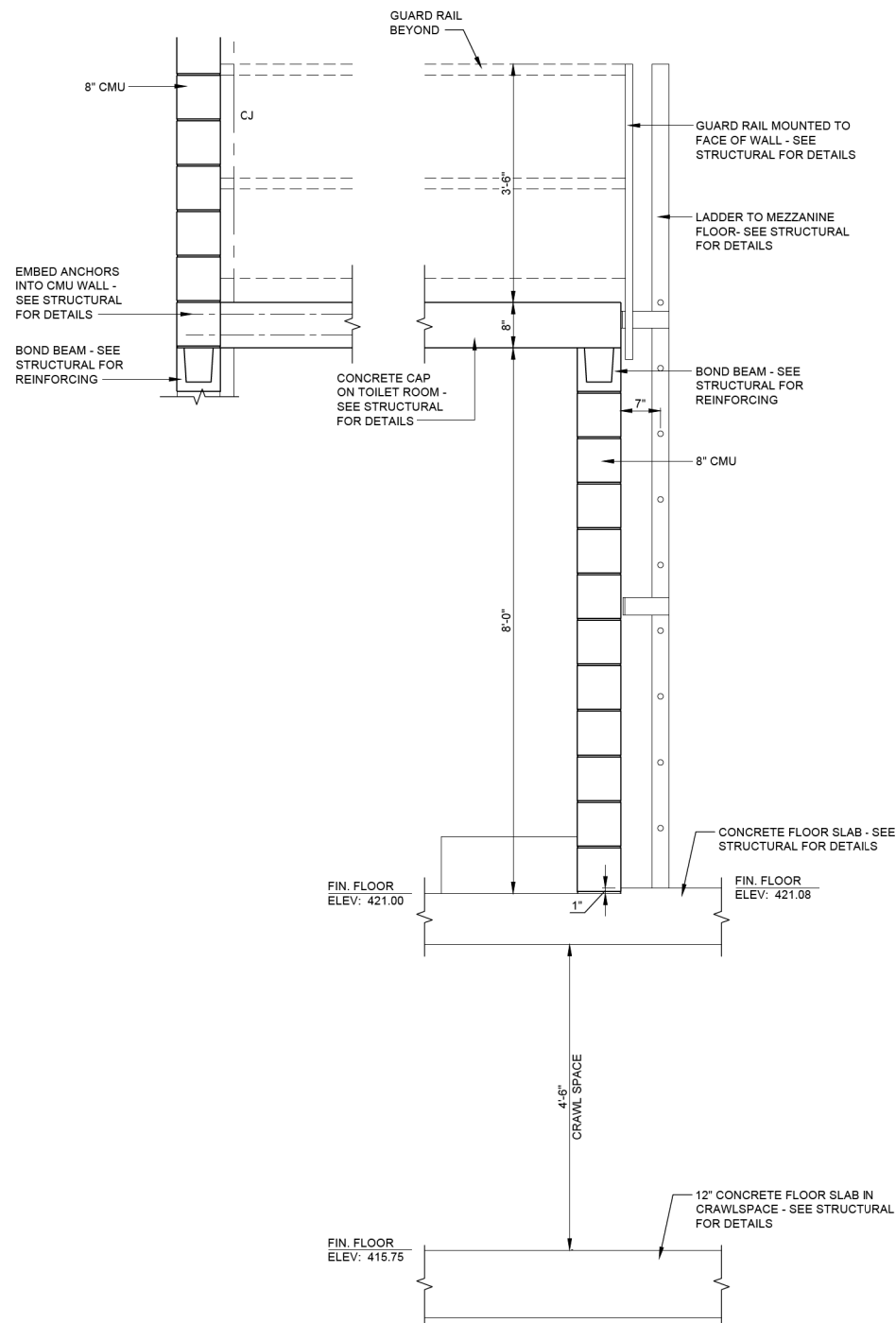
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WELL HOUSE BUILDING - BUILDING SECTIONS			
MISSOURI AVENUE DEEP WELL FACILITY			
SCALE: AS NOTED	SHEET 4 OF 8 SHEETS	STA.	TO STA.

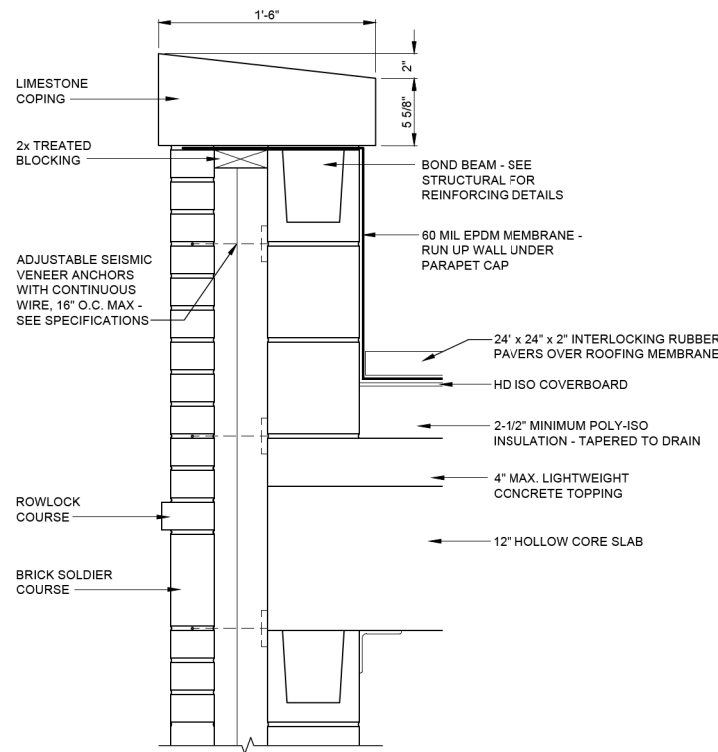
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55/70/64	82-4T-1	ST. CLAIR	185	70
CONTRACT NO. 76099				
ILLINOIS FED. AID PROJECT				

A301

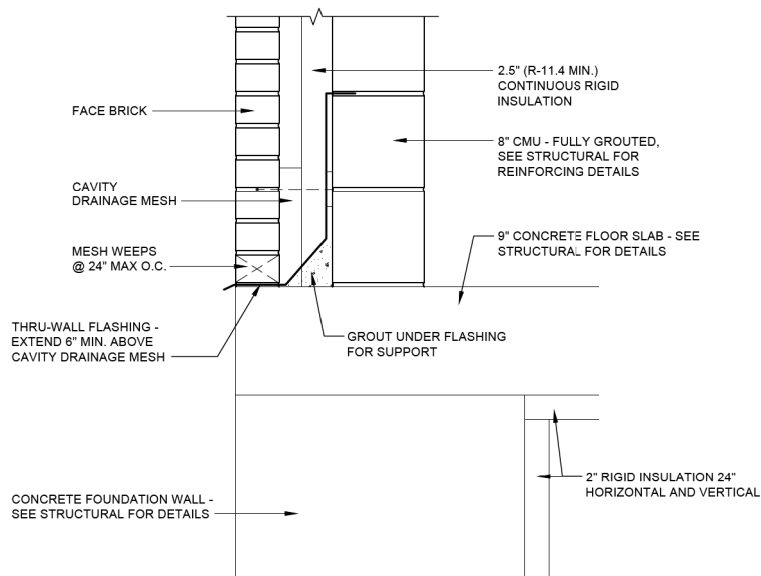
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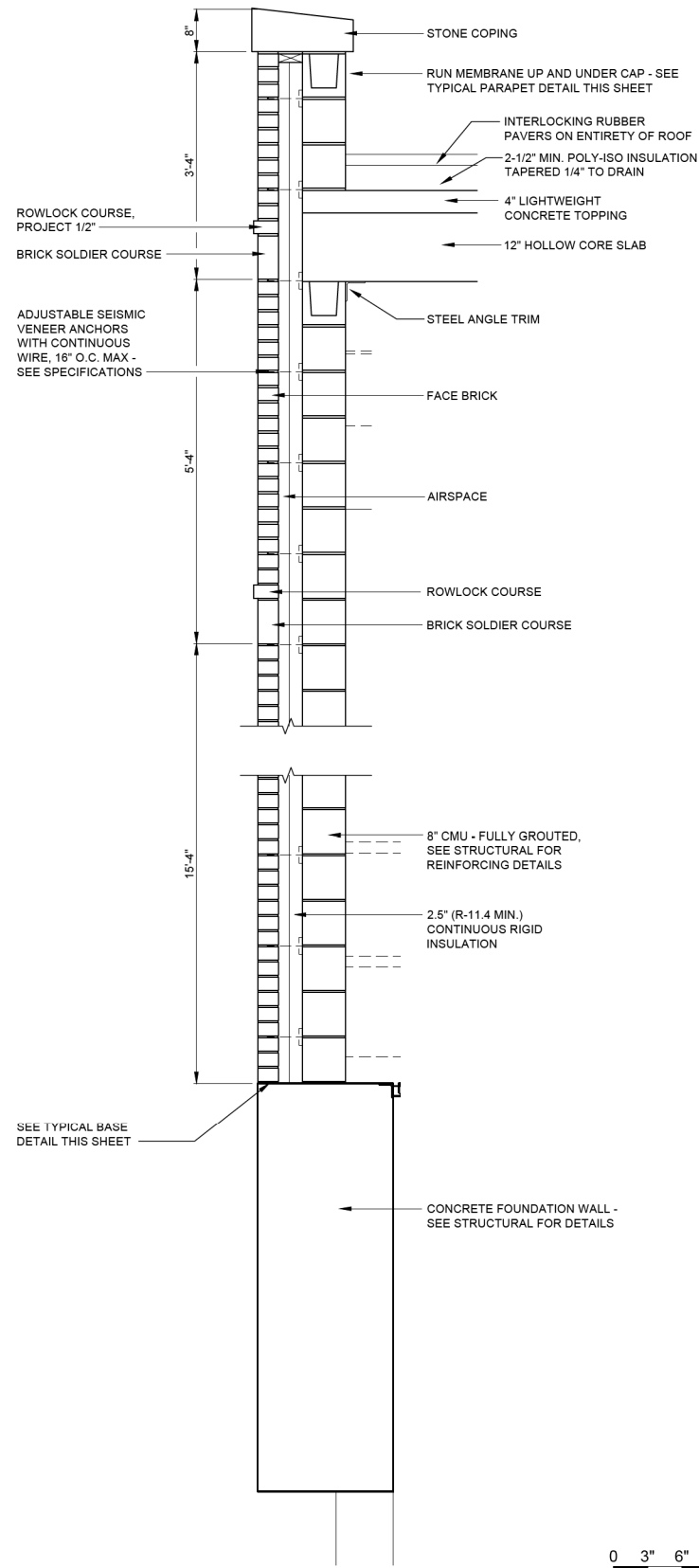
2 TOILET ROOM WALL SECTION
A302 SCALE: 3/4"=1'-0"



TYPICAL PARAPET DETAIL
SCALE: 1-1/2" = 1'-0"



TYPICAL BASE DETAIL
SCALE: 1-1/2" = 1'-0"

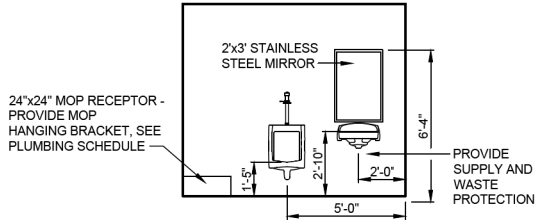


1 TYP. WALL SECTION
A302 SCALE: 3/4"=1'-0"

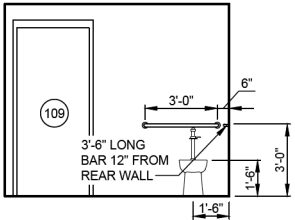
0 3" 6" 1'
SCALE: 1 1/2" = 1'-0"

0 1' 2'
SCALE: 3/4" = 1'-0"

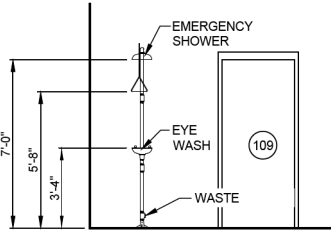
ROOM FINISH SCHEDULE									
ROOM OR AREA	FLOOR		BASE	WALLS		CEILING		FINISHED CEILING HEIGHT	REMARKS
	MATL	FINISH	FINISH	MATL	FINISH	MATL	FINISH		
101 GENERATOR ROOM	CONC	EPOXY-3	NONE	CMU	EPOXY-2	CONC	EPOXY-1	20'-8"	--
102 ELECTRICAL CONTROL ROOM	CONC	EPOXY-3	NONE	CMU	EPOXY-2	CONC	EPOXY-1	20'-8"	
103 TOILET	CONC	EPOXY-3	NONE	CMU	EPOXY-2	CONC	EPOXY-1	8'-0"	CAP TOILET ROOM - SEE STRUCTURAL
104 WELL ROOM	CONC	EPOXY-3	NONE	CMU	EPOXY-2	CONC	EPOXY-1	20'-8"	



A INTERIOR ELEVATION
A401 SCALE: 1/4"=1'-0"



B INTERIOR ELEVATION
A401 SCALE: 1/4"=1'-0"

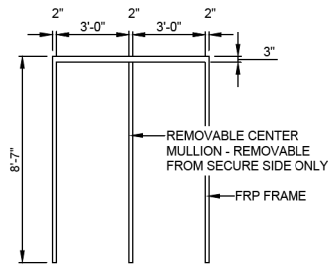


C EMER. SHOWER/EYE WASH
A401 SCALE: 1/4"=1'-0"

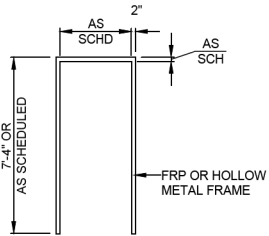
ABBREVIATIONS

ALUM ALUMINUM
CONC CONCRETE
EPOXY-1 HI-BUILD EPOXY COATING, COLOR: WHITE
EPOXY-2 HI-BUILD EPOXY COATING, COLOR: TANNERY
EPOXY-3 NON-SLIP EPOXY COATING, COLOR: LIGHT GRAY
FRP FIBERGLASS REINFORCED POLYMER
HM HOLLOW METAL

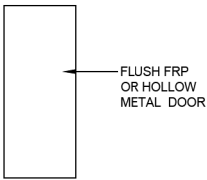
DOOR AND OPENING SCHEDULE											
MARK	DOOR		FRAME				HDW GRP	FIRE RATING	REMARKS		MARK
	SIZE	MATL	MATL	HEAD HGHT	HEAD DETAIL	JAMB DETAIL					
101	3'-8" x 7'-0" x 1-3/4"	FRP	FRP	4"	7/A401	2/A401	1	--	LOUVER ABOVE DOOR FRAME		101
102	12'-0" W X 16'-0" H COILING	FRP	STL	--	5/A401	6/A401	--		INSULATED SLATS		102
103	3'-0" X 7'-0" X 1-3/4"	FRP	FRP	4"	1/A401	2/A401	1				103
104	3'-0" X 7'-0" X 1-3/4"	HM	HM	3"	3/A401	4/A401	3	3 HR			104
105	3'-0" X 7'-0" X 1-3/4"	FRP	FRP	3"	1/A401	2/A401	1				105
106	(2) 3'-0" x 8'-4" x 1-3/4"	FRP	FRP	3"	1/A401	2/A401	2				106
107	3'-0" X 7'-0" X 1-3/4"	FRP	FRP	3"	3/A401	4/A401	4		WITH HALF LITE, SEE ELEVATION BELOW		107
108	3'-0" X 7'-0" X 1-3/4"	FRP	FRP	4"	3/A401	4/A401	4		WITH HALF LITE, SEE ELEVATION BELOW		108
109	3'-0" X 7'-0" X 1-3/4"	FRP	FRP	4"	3/A401	4/A401	5				109
110	12'-0" W X 12'-0" H SECTIONAL	ALUM	STL	--	5/A401	6/A401	--		INSULATED SECTIONAL WITH HIGH LIFT TRACK		110
111	3'-0" X 7'-0" X 1-3/4"	FRP	FRP	4"	1/A401	2/A401	1				111
112	4'-0" X 4'-0" FLOOR ACCESS HATCH	ALUM	ALUM	--	8/A401						112
113	4'-0" X 4'-0" FLOOR ACCESS HATCH	ALUM	ALUM	--	8/A401						113
114	2'-8" X 4'-0" ROOF ACCESS HATCH	ALUM	ALUM	--	8/A401						114
115	4'-0" X 8'-0" ROOF ACCESS HATCH	ALUM	ALUM	--	5/A102						115
116	4'-0" X 8'-0" ROOF ACCESS HATCH	ALUM	ALUM	--	5/A102						116



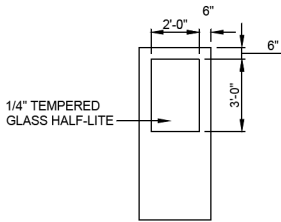
#106 FRAME TYPE



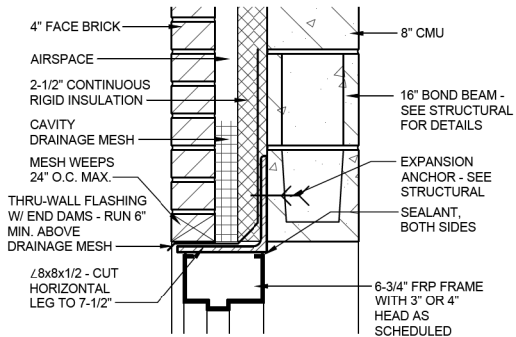
TYPICAL FRAME TYPE



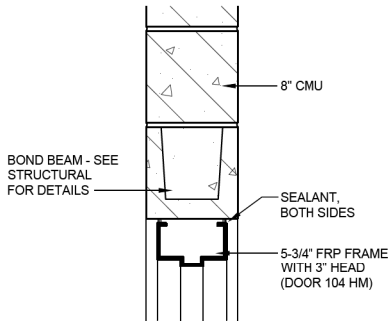
TYPICAL DOOR TYPE



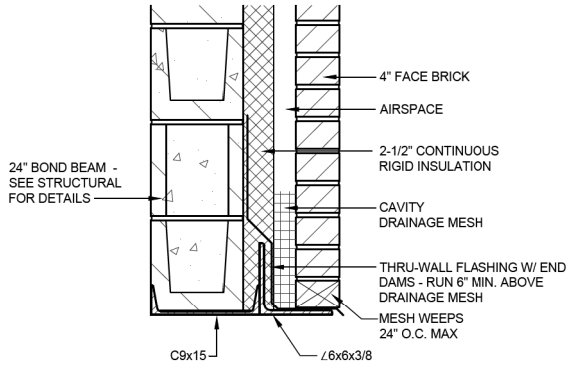
TYPICAL DOOR W/ LITE



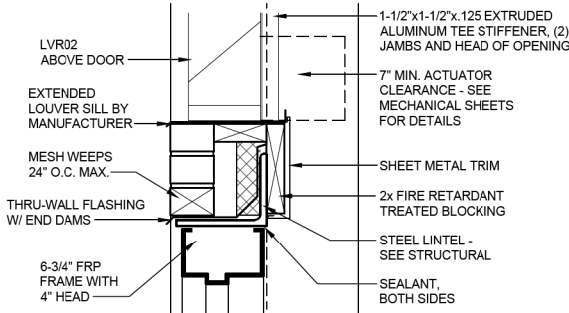
1 HEAD DETAIL
A401 SCALE: 1-1/2"=1'-0"



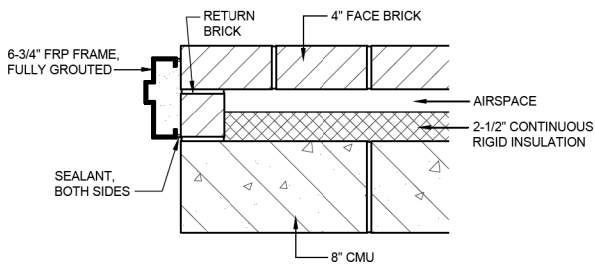
3 HEAD DETAIL
A401 SCALE: 1-1/2"=1'-0"



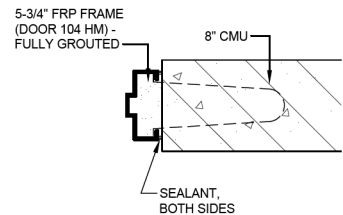
5 HEAD DETAIL
A401 SCALE: 1-1/2"=1'-0"



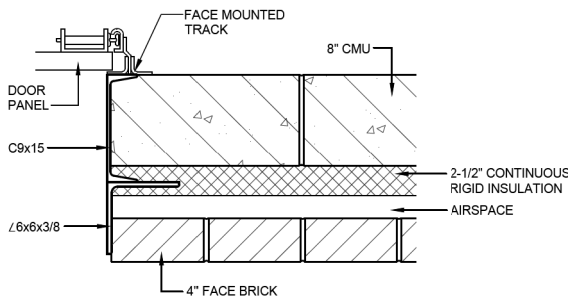
7 HEAD DETAIL
A401 SCALE: 1-1/2"=1'-0"



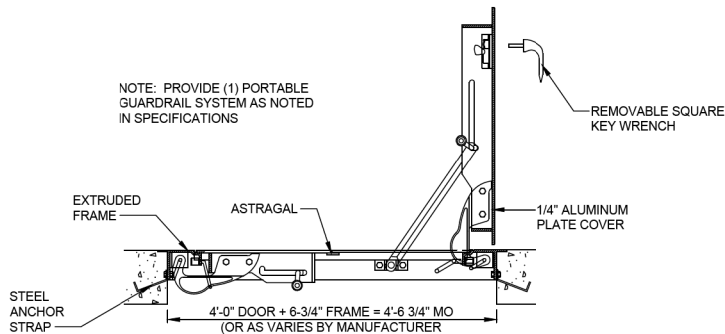
2 JAMB DETAIL
A401 SCALE: 1-1/2"=1'-0"



4 JAMB DETAIL
A401 SCALE: 1-1/2"=1'-0"



6 JAMB DETAIL
A401 SCALE: 1-1/2"=1'-0"



8 FLOOR HATCH DETAIL
A401 SCALE: 3/4"=1'-0"

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KLINGNER & ASSOCIATES, P.C.
Engineers • Architects • Surveyors

USER NAME = bgj
PLOT SCALE = 40.0000' / in.
PLOT DATE = 1/13/2015

DESIGNED - DEN
DRAWN - CRC
CHECKED - DEN
DATE - 8/22/2014

REVISED -
REVISED -
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WELL HOUSE BUILDING - SCHEDULES AND DETAILS
MISSOURI AVENUE DEEP WELL FACILITY

SCALE: AS NOTED SHEET 6 OF 8 SHEETS STA. TO STA.

F.A.I. RTE.
55/70/64

SECTION
82-4T-1

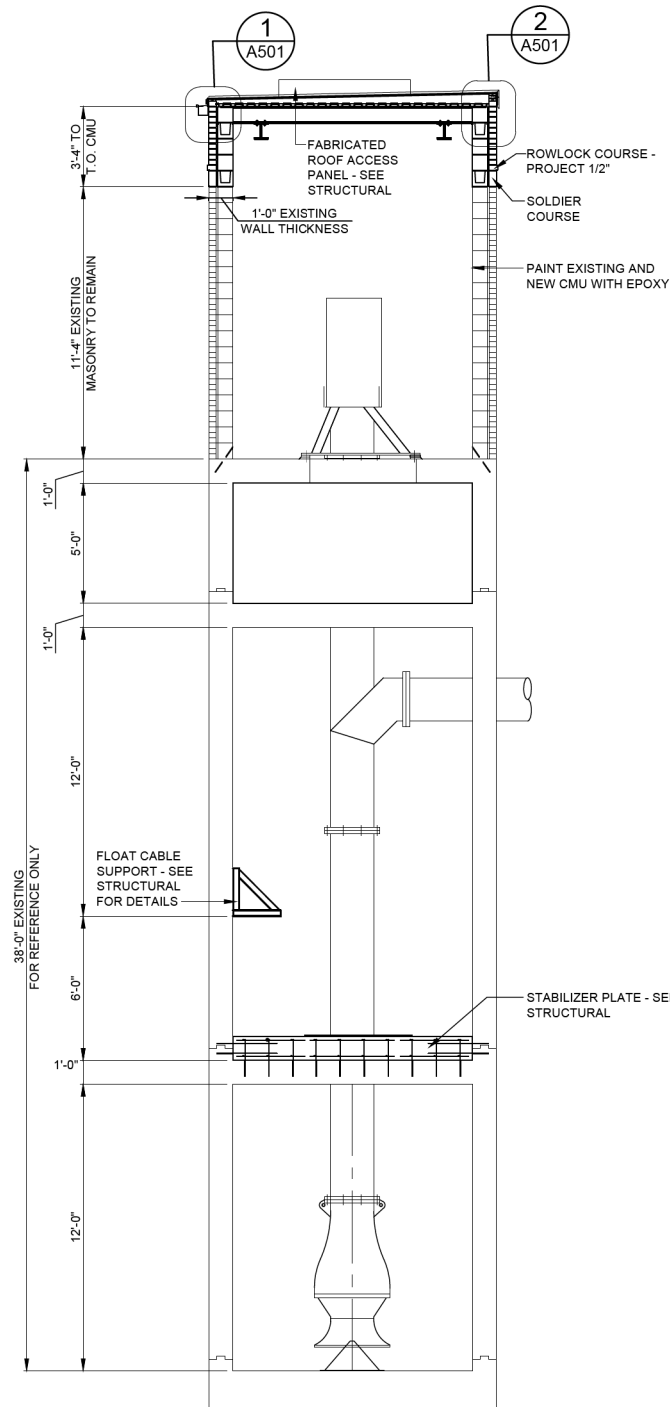
COUNTY
ST. CLAIR

TOTAL SHEETS 185
SHEET NO. 72
CONTRACT NO. 76C99

ILLINOIS FED. AID PROJECT

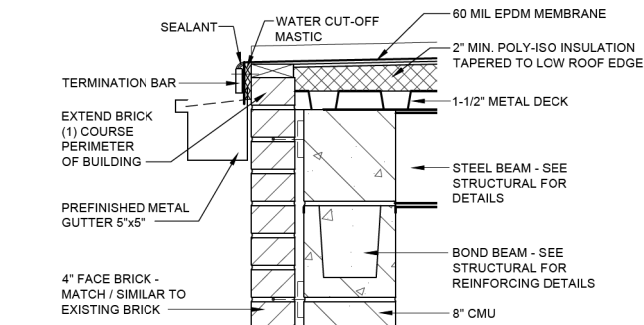
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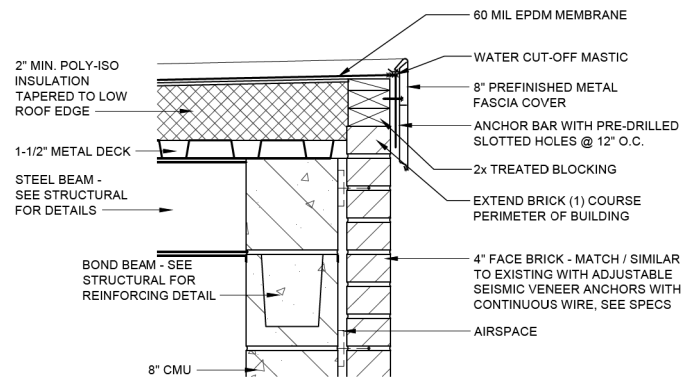


A SECTION
A501 SCALE: 1/4"=1'-0"

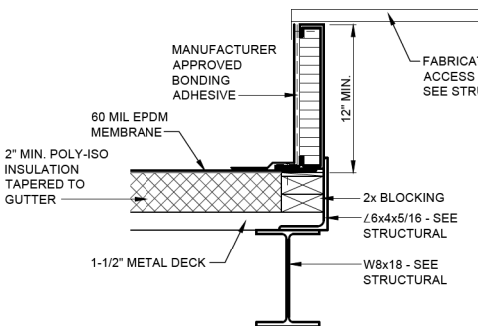
SEE STRUCTURAL SHEETS
FOR DEMOLITION NOTES



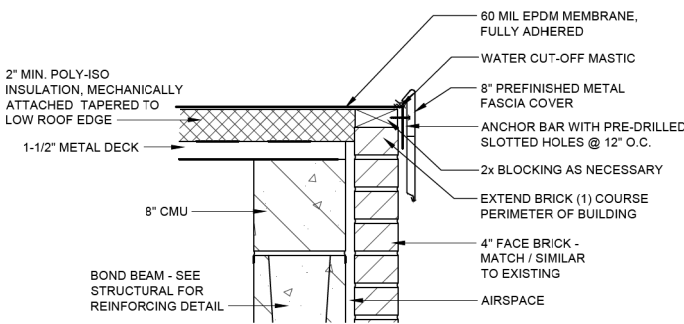
1 LOW EDGE DETAIL
A501 SCALE: 1-1/2"=1'-0"



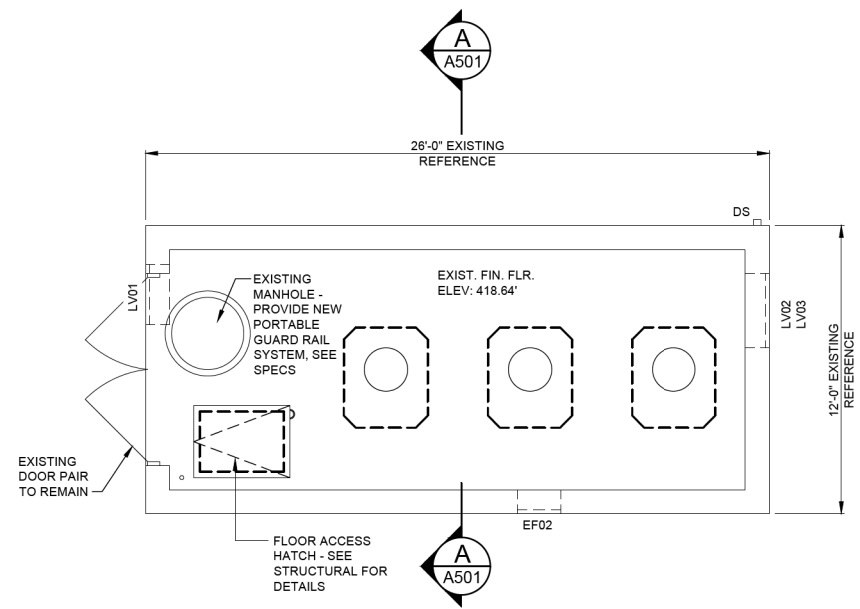
2 HIGH EDGE DETAIL
A501 SCALE: 1-1/2"=1'-0"



3 HATCH CURB DETAIL
A501 SCALE: 1-1/2"=1'-0"



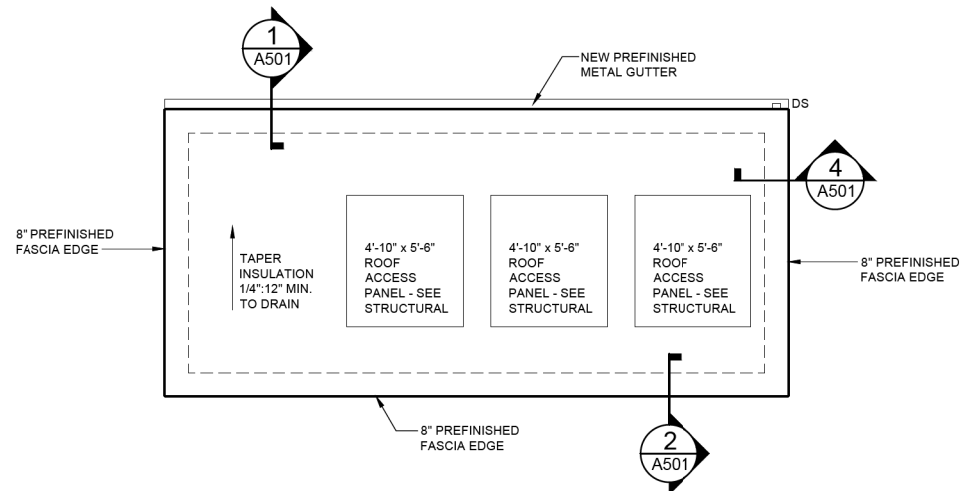
4 EDGE DETAIL
A501 SCALE: 1-1/2"=1'-0"



**EXISTING PUMP STATION BUILDING
FLOOR PLAN**

SCALE: 1/4" = 1'-0"

SEE STRUCTURAL SHEETS FOR
DEMOLITION NOTES



**EXISTING PUMP STATION BUILDING
ROOF PLAN**

SCALE: 1/4" = 1'-0"

SEE STRUCTURAL SHEETS FOR
DEMOLITION NOTES



0 2' 4' 8'
SCALE: 1/4" = 1'-0"
0 3' 6" 1'
SCALE: 1 1/2" = 1'-0"

**KLINGNER
& ASSOCIATES, P.C.**
Engineers • Architects • Surveyors

USER NAME = bgj	DESIGNED - DEN	REVISED -
PLOT SCALE = 40.0000' / in.	DRAWN - CRC	REVISED -
PLOT DATE = 1/13/2015	CHECKED - DEN	REVISED -
	DATE - 8/22/2014	REVISED -

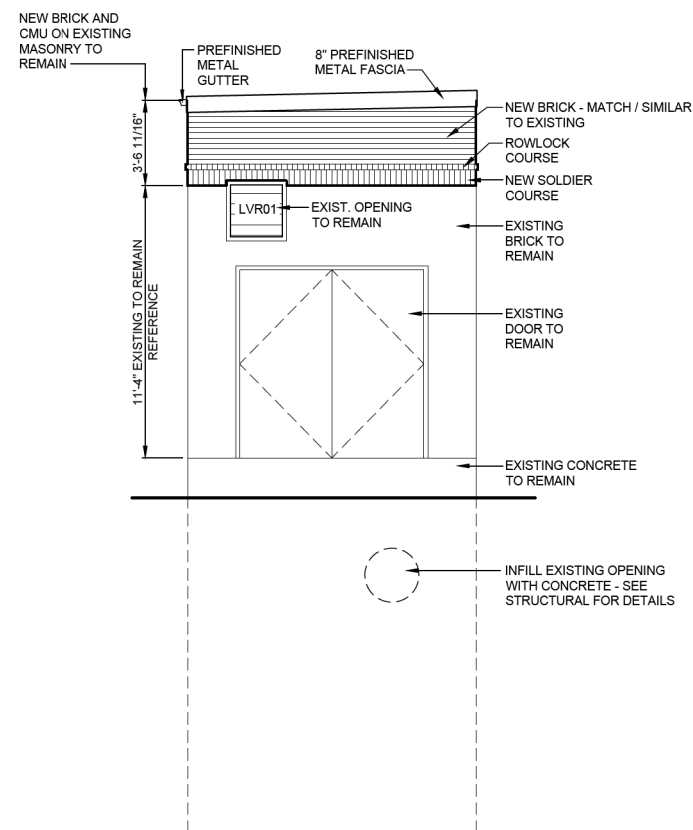
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXIST PUMP STATION BUILDING - PLAN AND DETAILS
MISSOURI AVENUE DEEP WELL FACILITY

SCALE: AS NOTED SHEET 7 OF 8 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55/70/64	82-4T-1	ST. CLAIR	185	73
CONTRACT NO. 76099				
ILLINOIS FED. AID PROJECT				

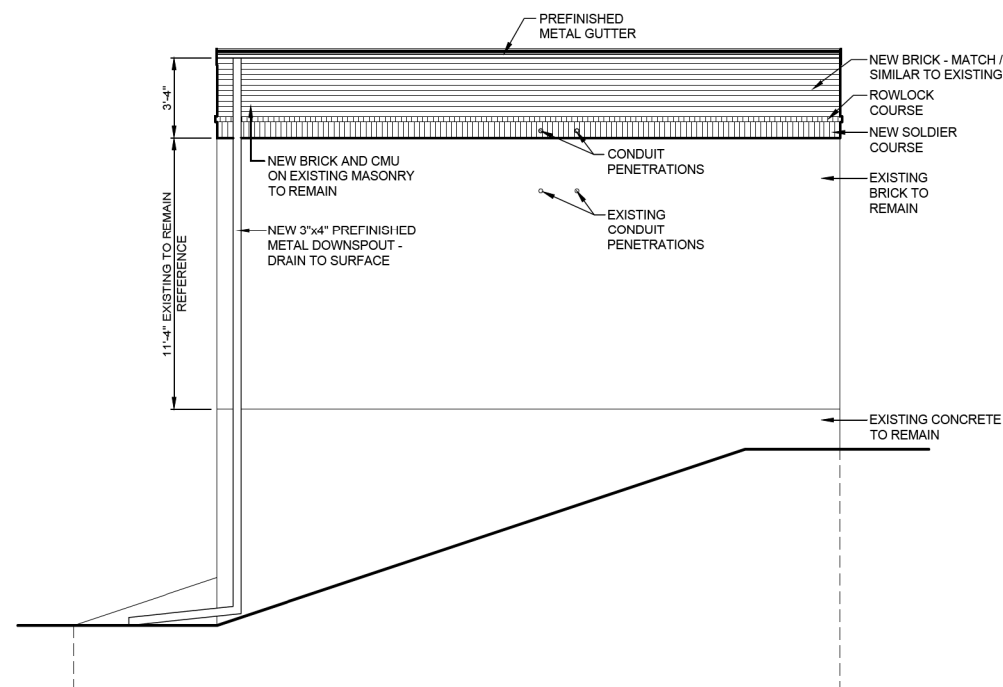
A501



NORTH ELEVATION

SCALE: 1/4" = 1'-0"

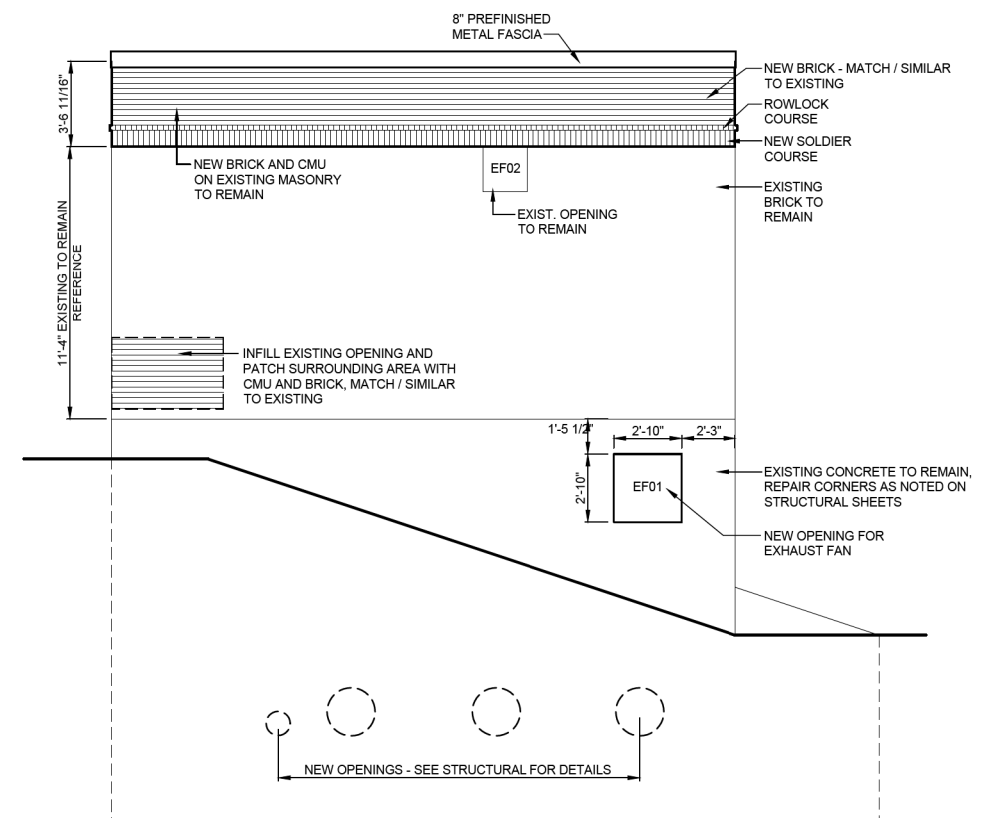
SEE STRUCTURAL SHEETS FOR
DEMOLITION NOTES



EAST ELEVATION

SCALE: 1/4" = 1'-0"

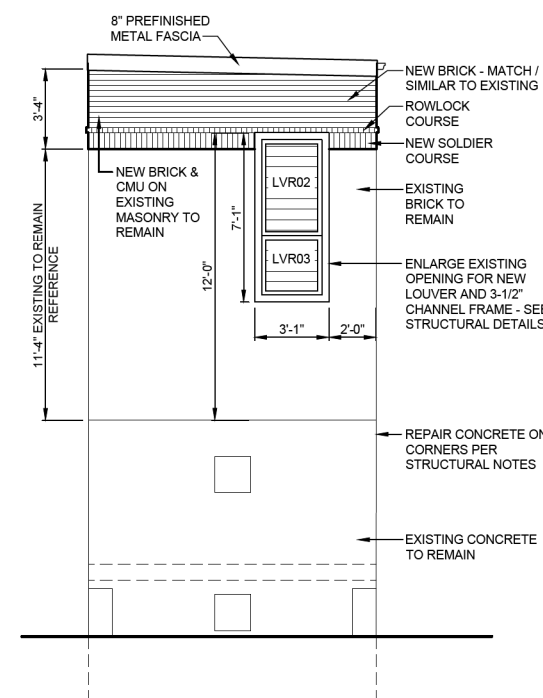
SEE STRUCTURAL SHEETS FOR
DEMOLITION NOTES



WEST ELEVATION

SCALE: 1/4" = 1'-0"

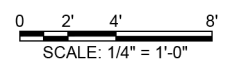
SEE STRUCTURAL SHEETS FOR
DEMOLITION NOTES



SOUTH ELEVATION

SCALE: 1/4" = 1'-0"

SEE STRUCTURAL SHEETS FOR
DEMOLITION NOTES



FILE NAME = G:\115\110023\Work - Order 6\CADD Sheets\0376C99-sh-tt-KLA St-0.dgn

DESIGN CRITERIA

1. BUILDING CODES:
a. IBC 2012

2. DESIGN LOADS:

EXISTING PUMP STATION BUILDING

- a. Roof Dead Load = 20psf
b. *Roof Live Load = 50 psf
- Per USACE Documentation
c. Floor Dead Load = 150 psf
d. Floor Live Load = 200 psf
e. Bridge Crane Load = 2 ton
f. Pump Loads
1) Large Pump
a. Weight of Pump and Motor = 15,000 lbs
b. Downthrust = 4,000 lbs
2) Maintenance Pump
a. Weight of Pump = 800 lbs

WELL HOUSE BUILDING

- g. Roof Dead Load = 100psf
h. *Roof Live Load = 50 psf
- Per USACE Documentation
i. Floor Dead Load = 115 psf
j. Floor Live Load = 200 psf
k. Crawl Space Live Load = 100 psf
l. Bridge Cranes
1) (2) - 2 ton cranes
2) 5 ton crane
m. Pump Loads
1) Weight of Pump and Motor = 15,000 lbs per pump
2) Downthrust = 10,000 lbs per pump
n. *Roof Snow Load
i. Ground Snow Load, Pg = 20 psf
ii. Thermal Factor, Ct = 1.0
iii. Importance Factor, Is = 1.0
iv. Flat Roof Snow Load, Ps= 20 psf
v. Design Snow Load, Ps = 20 psf

* Design is based on most critical effect of Roof Live Load or Roof Snow Load.

o. Wind Loading - Analytical Procedure

- i. Basic Wind Speed (3 Second Gust) = 90 mph
ii. Exposure Category C
iii. Importance Factor, Iw = 1.0
iv. Directional Factor, Kd = 0.85
v. Internal Pressure Coefficient, GCPI = ±0.55
(Partially Enclosed)

p. Seismic Loading - Equivalent Lateral Force Procedure

- i. Importance Factor, Ie = 1.0
ii. Site Class D
iii. Sds = 0.51 (Ss = 60.0%)
iv. Sd1 = 0.25 (S1 = 18.0%)
v. Seismic Design Category D

GENERAL

1. The structure is designed to be self-supporting and stable after the building is fully completed. It is solely the contractor's responsibility to determine erection procedure and sequence and insure the safety of the construction personnel, public, building and its components parts, and adjacent buildings and properties. This includes the addition of whatever temporary or permanent shoring, bracing, needling, underpinning, or sheet piling, etc. that may be necessary to brace new construction, adjacent buildings, so that the structure is braced for wind, seismic, gravity, construction loads, etc. and that no horizontal or vertical settlement or any damage occurs to the adjacent existing structure. Temporary supports shall be maintained in place until permanents supports and/or shoring and bracing are installed.
2. Plan dimensions and details relative to existing structure have been taken from existing plans and are subjected to nominal construction variations. It shall be the contractor's responsibility to verify such dimensions and details in the field, and make necessary approved adjustments prior to construction or ordering of materials.
3. It is the contractor's responsibility to enforce all applicable safety codes and regulations during all phases of construction.
4. The contractor shall perform all construction for the project in a manner and sequence that are based on accepted industry standards that recognize the interaction of the components that comprise the structure, without causing distress, unanticipated movements or irregular load paths as a result of the construction means and methods employed.
5. Construction loads shall not exceed design live loads. The contractor shall be responsible for all design required to support construction equipment used in constructing this project. Shoring and reshoring is the responsibility of the contractor.
6. Principal openings through the framing are shown on these drawings. The general contractor shall examine the structural and mechanical drawings for the required openings and shall verify size and location of all openings with the mechanical contractor. Providing all openings required by the mechanical, electrical, plumbing, or other trades shall be part of the general contract, whether or not shown in the structural drawings. Any deviation from the openings shown on the structural drawings shall be brought to the engineer's attention for review.
7. All contractors are required to examine the drawings and specifications carefully, visit the site and fully inform themselves as to all existing conditions and limitations, prior to agreeing to perform the work. Failure to visit the site and familiarize themselves with the existing conditions and limitations will in no way relieve the contractor from furnishing any materials or performing any work in accordance with drawings and specifications without additional cost to the owner.
8. Details labeled "Typical Details" on drawings apply to situations occurring on the project that are the same or similar to those specifically details. Such details apply whether or not details are referenced at each location. Notify engineer of clarification regarding applicability of "Typical Details".
9. Work these drawings with architectural, mechanical, and electrical drawings. Any discrepancies shall be brought to the attention of the engineer.
10. Do not scale drawings.
11. Any discrepancies between structural and architectural drawings shall be brought to the attention of the architect and structural engineer.
12. Should any of the general notes conflict with any details or instructions on plans, or in the specifications, the strictest provision shall govern.
13. The existing Pump Station Building shall remain in continuous operation during construction. Only one pump may be removed from service at a time.
14. During construction the contractor shall be responsible for maintenance of the existing Pump Station Building.
15. Coordinate exact location of all major components with the engineer, before installation.
16. All pipe sleeve openings through concrete slabs shall be formed with standard galvanized steel pipe.
17. Structural plans and details are based upon the dimensions and requirements of specific pumps and other equipment. The contractor shall verify all dimensions with the pumps and equipment provided prior to fabrication and construction. If the pumps and equipment are different than what was assumed during design, the contractor shall adjust the plans, if needed, to meet dimensional and other requirements of pumps and equipment provided. Any changes to the plans shall be approved by the Engineer and IDOT prior to fabrication and construction. The cost to update the plans is at the contractor expense and shall be included in pay items being updated.

18. No electrical conduit shall be placed above the welded wire fabric or top reinforcing of slab.
19. The placement of sleeves, outlet boxes, box-outs, anchors, etc., for the mechanical, electrical and plumbing trades is the responsibility of the trade involved; however, any box-outs not covered by typical details in structural drawings shall be submitted for approval.

CAST-IN-PLACE CONCRETE

1. Class SI Concrete shall be used throughout.
2. Concrete material and work shall be in conformance with the requirements of the Illinois Department of Transportation Standard Specifications for Road and Bridge Construction, adopted January 1, 2012.
3. Concrete shall be discharged at the site within 1 ½ hours after water has been added to the cement and aggregates. Addition of water to the mix at the project site will not be permitted. All water must be added at the batch plant. Slump may be adjusted only through the use of additional water reducing admixtures or high range water reducing admixture.
4. Reinforcing bars shall conform to AASHTO A706, Grade 60, No tack welding of reinforcing in the field will be permitted.
5. Welded wire fabric reinforcing shall conform to AASHTO M55, plain, fabricated from as-drawn steel wire into flat sheets.
6. Wire bar supports shall be furnished for all reinforcing within slabs, inclusive of welded wire fabric. Bottom bars in slabs-on-grade may be supported by other suitable supports. Reinforcing shall be properly positioned prior to concrete placement and may not be re-positioned once concrete operations have begun.
7. Reinforcing steel shop drawings shall indicate the sequence in which layers of crossing reinforcing should be placed in order to produce the correct outermost layer as indicated on the drawings.
8. Light-weight concrete mixtures shall meet the requirements of ACI 301.
9. All hooks shown on drawings shall be standard hooks, unless otherwise noted.
10. Where continuous bars are called for, they shall run continuously around corners and be lapped at necessary splices, or hook at discontinuous ends. Lap lengths shall be given in the splice length table.
11. SPLICE LENGTHS
- | BarSize | Min.Lap |
|---------|---------|
| #3 | 1'-3" |
| #4 | 1'-11" |
| #5 | 2'-5" |
| #6 | 2'-11" |
| #7 | 3'-10" |
| #8 | 5'-1" |
| #9 | 6'-5" |
| #10 | 8'-1" |
| #11 | 10'-0" |
- *When lapping two different size bars, use the lap dimension of the larger bar

PRECAST CONCRETE

1. Precast concrete construction shall consist of the design, manufacture, transportation and erection of hollow core roof planks.
2. Design of precast members shall be in accordance with ACI 318 - Latest Edition.
3. Precast members may be conventionally reinforced and/or prestressed, consistent with the design loads, spans, handling stresses, etc. Design loads are shown on drawings.
4. Precast contractor shall furnish complete design calculations, including details of connections, bearings, fittings and anticipated cambers.
5. Precast contractor shall furnish and place any temporary shoring, bracing, etc., required for erection of precast work.
6. Precast contractor shall furnish all plates, inserts, angles, rods, etc., required to connect precast to precast or cast-in-place concrete member or structural steel members. Details placing plans shall be furnished for all items to be embedded in cast-in-place concrete.
7. Precast manufacturer shall cast in structural inserts, bolts, plates, angles, dowels, keyways and detailed in the contract drawings.
8. Erection of precast members shall include the furnishing and placing of mild steel reinforcing, wet cast or dry pack concrete at closures of connections outside of precast element.
9. In order to accommodate varying manufacturing and erection procedures, shop practices, etc, deviations from the details and members sizes shown in the contract will be considered. Such deviations will be permitted only after the engineer's approval.
10. Precast hollow core roof planks shall be designed to support the loads shown on the drawings, plus additional concentrations, such as partitions. Refer to architectural and mechanical drawings for openings required through the plank. Precaster shall lay out his planks, considering such openings, and shall furnish any headers or supports as required. Locations of field cut openings shall be coordinated with plank layout. Precaster shall grout all joints between planks.
11. Precast contractor must make provisions for anchorage requirements of all cladding and shall provide necessary hardware required to cast into columns, girders and slabs. Coordinate these requirements with architectural drawing and cladding details.

ALUMINUM

1. Aluminum grating shall be extruded I-Bar SG Series with striated top and bottom flanges to provide a skid resistance surface. The grating profile shall be 19-SG-4 with 1 3/8" bar spacing and 4" cross bar spacing. The aluminum shall be 6063-T6 or 6061-T6 alloy per ASTM B221. Attached grating to beams with stainless steel saddle clips. Provide two clips per panel per each beam crossed or angle bearing.
2. All aluminum shall have a clear anodized finish to increase corrosion resistance. Aluminum surfaces are not painted.
3. All aluminum in contact with concrete or dissimilar metals shall be coated with two coats of coal tar epoxy, approved by the engineer, unless otherwise noted.
4. Aluminum angles, channels, tees and I-beams shall be 6061-T6 alloy, extruded and comply with ASTM B308, with Minimum yield strength of 32,000 psi.

ABBREVIATIONS

&	AND	HORIZ. (H)	HORIZONTAL
A.B.	ANCHOR BOLT	H.S.B.	HIGH STRENGTH BOLT
ALT.	ALTERNATE	HT.	HEIGHT
ARCH.	ARCHITECT	I.F.	INSIDE FACE
ARCH'L.	ARCHITECTURAL	I.D.	INSIDE DIAMETER
@	AT	JST.	JOIST
B.O.F.	BOTTOM OF FOOTING	KB	KNEE BRACE
BLDG.	BUILDING	L.B.	LAG BOLT
BLK.	BLOCK	L.G.	LONG
BM.	BEAM	L.L.	LIVE LOAD
B.N.	BOUNDARY NAIL	LLH	LONG LEG HORIZONTAL
B.O.	BOTTOM OF	LLV	LONG LEG VERTICAL
BTM.	BOTTOM	LONGIT.	LONGITUDINAL
BRG.	BEARING	L.P.	LOW POINT
BRDG.	BRIDGING	L.W.C.	LIGHT WEIGHT CONCRETE
BT.	BENT	MAS.	MASONRY
C.B.	CARRIAGE BOLT	MAX.	MAXIMUM
C.J.	CONSTRUCTION JOINT	MECH.	MECHANICAL
CL. (¢)	CENTERLINE	MIN.	MINIMUM
CLR.	CLEAR	N.I.C.	NOT IN CONTRACT
CMU	CONCRETE MASONRY UNIT	NO. (#)	NUMBER
COL.	COLUMN	N.T.S.	NOT TO SCALE
COLS.	COLUMNS	O.C.	ON CENTER
CONC.	CONCRETE	O.F.	OUTSIDE FACE
CONT.	CONTINUOUS	O.H.	OPPOSITE HAND
COORD.	COORDINATE	OPNG.	OPENING
CSK.	COUNTERSINK	OVHD.	OVERHEAD
CTR.	CENTER	PL (¢)	PLATE
d	PENNEY (NAILS)	PLY.	PLYWOOD
DBL.	DOUBLE	P.S.F.	POUNDS PER SQUARE FOOT
D.F.L.	DOUGLAS FIR LARCH	P.S.I.	POUNDS PER SQUARE INCH
DIA (Ø)	DIAMETER	P.T.	PRESSURE TREATED
DIAPH.	DIAPHRAGM	P.T.S	POST TENSION SLAB
D.L.	DEAD LOAD	REINF.	REINFORCING
do.	DITTO	R.O.	ROUGH OPENING
dp.	DEEP	SCH.	SCHEDULE
DWG.	DRAWING	SHT.	SHEET
DWLS.	DOWELS	SIM.	SIMILAR
EA.	EACH	SIMP.	SIMPSON CONNECTOR
EA. END	EACH END	SPC'G.	SPACING
EA. SIDE	EACH SIDE	STA.	STATION
E.B.	EXPANSION BOLT	STAGG.	STAGGERED
ELEV.	ELEVATION	STD.	STANDARD
E.F.	EACH FACE	STIFF.	STIFFENER
E.N.	EDGE NAIL	STR.	STRUCTURAL
E.W.	EACH WAY	THK.	THICK
EX.	EXISTING	THRU.	THROUGH
EXIST.	EXISTING	T. & B.	TOP & BOTTOM
F.B.	FLAT BAR	T.N.	TOE NAIL
FDN.	FOUNDATION	T.O.	TOP OF
FIN.	FINISHED	T.O.B.	TOP OF BEAM
FLR.	FLOOR	T.O.F.	TOP OF FOOTING
F.N.	FIELD NAILING	T.O.G.	TOP OF GIRT
F.O.C.	FACE OF CONCRETE	T.O.M.	TOP OF MASONRY
F.O.M.	FACE OF MASONRY	T.O.S.	TOP OF STEEL
F.O.S.	FACE OF STUDS	T.O.W.	TOP OF WALL
FTG.	FOOTING	TRANSV.	TRANSVERSE
F.V.	FIELD VERIFY	T.SL.	TOP OF SLAB
GA.	GAUGE	TYP.	TYPICAL
GALV.	GALVANIZED	U.O.N.	UNLESS OTHERWISE NOTED
G.C.	GENERAL CONTRACTOR	VERT. (V)	VERTICAL
GLB.	GLUE-LAMINATED BEAM	W/	WITH
HDR.	HEADER	WD.	WOOD
HGR.	HANGER	W.W.F.	WELDED WIRE FABRIC



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PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 1/13/2015	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STRUCTURAL NOTES				F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
MISSOURI AVENUE DEEP WELL FACILITY				55/70/64	82-4T-1	ST. CLAIR	185	75
SCALE: AS NOTED				SHEET 1 OF 2 SHEETS		CONTRACT NO. 76G99		
STA. TO STA.				ILLINOIS FED. AID PROJECT				

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STRUCTURAL STEEL

1. Detailing, fabrication and erection shall conform to the AISI Specifications and Standard Code of Practice for the year referenced in the building code noted and the project Specifications.
2. Steel shall conform to the following grades unless otherwise noted:

a. W Shapes - ASTM A992 Grade 50 (Fy=50 ksi)

b. Plates, Channels, Angles and Bars - ASTM A36 (Fy=36 ksi)

c. Pipes - ASTM A53 (Fy=35 ksi)

e. Bolts - ASTM 325-n

f. Washers - ASTM F436

g. Nuts - ASTM A563

h. Anchor Rods (Bolts) - ASTM F1554 Grade 36 (Fy=36 ksi)

i. Welding Electrodes - E70xx

j. Clevis - ASTM A668

k. Turnbuckle - ASTM F1145

l. Grout for Base Plates - Prepacked , non-metallic, no-gaseous, and non-shrink per CRD C621 and ASTM C1107 at fluid consistency (Flow Cone) of 20-30 seconds. 28 day compressive strength = 7000 psi.
3. All column base plates shall have a minimum of four (4) anchor rods.
4. Steel fabrication and erection shall follow OSHA requirements.
5. All welding shall be in accordance with the "Structural Welding Code", AWS D1.1, Latest Edition.
6. General contractor shall verify all structural beam locations, mechanical units weights and opening sizes and locations with mechanical contractor and vendor's drawings for actual mechanical unit purchased.
7. Cuts, holes, coping, etc. required for work of other trades shall be shown on the shop drawings and made in the shop. Cuts or burning of holes in the structural steel members in the field will not be permitted, unless specifically approved in each case by the engineer.
8. Splicing of structural members where not detailed on the drawings is prohibited without prior approval of the structural engineer.
9. Hot dip galvanize per ASTM A123 after fabricating the following steel members:

a. All Structural Steel Shapes

b. All Handrails, Posts and Plates

c. All Ladders and Brackets

d. All Lintels, Door Heads and Door Jambs

e. All Bollards inside building

f. Diamond Tread Plate

g. Fall Protection Tie-offs

h. Brackets
10. Mechanical Galvanizing per ASTM B695 after fabricating the following steel members:

a. Bolts

b. Nuts

c. Washers

d. Anchor Rods

e. Threaded Rods
11. Repair galvanized surfaces according to ASTM A 780.
12. Stainless Steel Shall meet:

a. ASTM A276 for structural shapes

b. ASTM F593 and F594 for Bolts, Nuts, Anchors and Rods
13. Stainless Steel shall be Type 304L Stainless Steel, unless noted otherwise.
14. Hot Rolled Steel Diamond Tread Plate shall meet ASTM A786 Specifications.

a. Minimum yield strength = 36 ksi

b. Hot Dip Galvanized

METAL DECKING

1. Fabricated roof decks, without top-flange stiffening grooves, shall comply with "Steel Deck Institute (SDI) Specifications and Commentary for Steel Roof Decks", in SDI Publication No. 30.
2. Fabricated Noncomposite Steel Floor Deck shall comply with "Steel Deck Institute (SDI) .
3. Specifications and Commentary for Noncomposite Steel Form Deck", in SDI Publication No. 30.
4. Deck shall be galvanized steel sheets that comply with ASTM A653, Structural Steel, Grade 33, G60 Galvanized Coating.
5. Lap deck 4" minimum at splices center on support.
6. Deck manufacturer shall coordinate size and location of roof openings with architectural and mechanical drawings and suppliers.
7. No light gage framing, mechanical, electrical or other equipment shall be suspended from or attached to any metal roof deck.
8. See drawings for deck attachment patterns.

MASONRY

1. All masonry shall conform to "Building Code Requirements for Masonry Structures" (ACI 530/ASCE 5/TMS 402) and "Specifications for Masonry Structures" (ACI 530.1/ASCE 6/TMS 602) for the year referenced in the building code noted.
2. All brick and concrete masonry and construction shall comply with the recommendations of Brick Industry of Association (BIA) and the National Concrete Masonry Association (NCMA) and minimum requirement established by noted building codes.
3. Grout to fill cores shall be ASTM C476, coarse grout (3/8" maximum aggregate) with a minimum compressive strength of 3000 psi in 28 days.
4. Concrete masonry units shall be units conforming to ASTM C90, Grade N, Type I, Light Weight (density of unit = 105 pcf), min. block compressive strength = 2400 psi, specified design strength of masonry, fm=1500.
5. ASTM C270 Type "S" mortar with a minimum compressive strength of 1800 psi shall be used for all masonry.
6. Reinforcing bars shall conform to AASHTO A706, Grade 60.
7. All cores with reinforcement shall be filled solid with grout. Place reinforcing bars before grouting. Place grout in lifts not exceeding 5 feet. Consolidate each lift by mechanical vibration. The next lift of the pour may be after initial water loss and reconsolidation of the prior lift, while it is still plastic.
8. Add an additional vertical reinforcement in center of fully grout cells at each side of openings in CMU wall and on each side of control joint, as shown on drawings.
9. Properly secure reinforcing bars to maintain the position indicated on the drawings. Bars are to be located in center of cells unless otherwise noted.
10. Mortar protrusions extending into cells or cavities to be reinforced and filled, shall be removed.
11. Lay masonry units with full mortar coverage on horizontal and vertical face shell. Bed webs in mortar in starting course of footing and in all courses of columns and pilasters, and where adjacent to cells or cavities to be reinforced of filled with grout.
12. All masonry walls shall have vertical control joints, as shown on drawings. Coordinate with locations indicated on architectural drawings. Control joints shall extend through entire wall thickness, except at continuous bond beams at the roof line the masonry shall be scored only.
13. All CMU shall be temporarily braced during construction per the governing building code for lateral loads until permanent restraints have been installed. Temporary bracing is the sole responsibility of the contractor. The contractor is responsible for all cost associated with repairs resulting from improper or insufficient bracing.
14. All lintels on the shall be hot dipped galvanized.
15. Anchor brick to concrete block with seismic masonry-veneer anchors per Section 042000 of Specifications.
16. Preformed Control-Joint Gaskets shall be made from styrene-butadiene-rubber compound, complying with ASTM D 2000, Designation M2AA-805 and designed to fit standard sash block and to maintain materal stability in masonry wall.

SPECIAL INSPECTIONS AND TESTING

1. The owner shall employ an independent special inspector and test agency to perform the required special inspections and tests per Specifications.
2. Special inspection and testing reports shall be furnished to owner, structural engineer, and contractor.
3. The special inspector shall submit a final report stating that the structural work was, to the best of the special inspector's knowledge, performed in accordance with the construction documents.
4. Special inspections shall conform to Chapter 17 of the International Building Code, IBC, 2012. Special inspections include:

a. Steel Construction - Section 1705.2 of IBC 2012

b. Concrete Construction - Section 1705.3 of IBC 2012

c. Masonry Construction - Section 1705.4 of IBC 2012

d. Soils - Section 1705.6 of IBC 2012

SAFTEY GATE:

1. Safety gates shall meet OSHA Requirments
2. The gates shall be able to be installed with no cutting, welding or drilling. The gates shall fit the handrail.
3. The gates shall have stainless steel springs that automatically close the gate after each passage.
4. The gates shall have a positive stop mechanism that provides a positive stop without handrail or handrail post contact.
5. The gates shall be A36 Carbon Steel Galvanized.

SUGGESTED SEQUENCE OF CONSTRUCTION - EXISTING PUMP STATION BUILDING:

1. Completely remove existing Flexicore Roof, 8-inch monorail, and existing CMU wall, as shown on demo drawings.
2. Sawcut 42"x30" Opening in slab at elevation 418.64, as shown on demo sheets.
3. Disconnect and remove existing Pump No. 1 (SW-P01).
4. Frame and pour 12" full height wall between Pump No. 1 (SW-P01) and Pump No. 2 (SW-P02) at elevation 412.64 (Stage 1 Construction Line). Use rapid hardening concrete.
5. Patch manhole and existing Pump 1 openings at elevation 418.64 with new concrete (do not patch areas where new openings will be added).
6. Patch existing Pump 1 openings at elevation 412.64 and 393.64 with new concrete (do not patch areas where new openings will be added).
7. Frame and pour (3) 12"x10" Reinforced Concrete Beams around Pump No. 1 (SW-P01) opening below elevation 418.64.
8. Frame and pour 28"x12" Reinforced Concrete Beam between Pump No. 1 (SW-P01) and Pump No. 2 (SW-P02) at elevation 393.64 (Stage 1 Construction Line).
9. Frame and pour Reinforced Concrete Beams around Pump No. 1 (SW-P01) opening at elevation 393.64.
10. Core openings, for New Pump No. 1, into slabs at elevation 418.64, 412.64, and 393.64 and into existing concrete wall. See demo sheets for opening sizes.
11. Seal 2'-0" square opening in new 12" full height concrete wall with steel plate.
12. Install new pump 1 (SW-P01) and all attachments and bring pump into service.
13. Repeat Steps 3 and 4 for Pump No. 2 (SW-P02).
14. Remcve and salvage steel plate from new concrete wall and move plate to new wall.
15. Repeat Steps 5-12 for Pump No.2 (SW-P02).
16. Remove steel plate from new concrete wall.
17. Frame and pour 12" full height wall between Pump No. 3 (SW-P03) and Pump No. 4 (SW-P04) at elevation 412.64.
18. Disconnect and remove existing Pump No. 3 (SW-P03).
19. Patch existing Pump 3 openings at elevation 418.64, 412.64 and 393.64 with new concrete (do not patch areas where new openings will be added).
20. Frame and pour (2) 12"x10" Reinforced Concrete Beams around Pump No. 1 (SW-P01) opening below elevation 418.64.
21. Remove existing slab at elevation 393.64 and existing 12" thick concrete wall at elevation 412.64, as shown on demo plans.
22. Frame and pour Reinforced Concrete Slab (Stage 3 Construction Line) at elevation 393.64.
23. Frame and pour Reinforced Concrete beams around Pump No.3 (SW-P03) opening at elevation 393.64.
24. Core openings, for New Pump No. 3, into slabs at elevation 418.64, 412.64, and 393.64. See demo sheets for opening sizes.
25. Core openings, for New Pump No. 4, into slabs at elevation 412.64, and 393.64. See demo sheets for opening sizes.
26. Install new pumps 3 (SW-P03) and 4 (SW-P04), stilling well, and all attachments and bring pumps into service.
27. Complete remaining Stage 3 demo.
28. Complete all CMU work, handrail and grating installation, steel construction and new roof construction, as shown on plans

SUMMARY OF QUANTITIES					
CODE NO.	ITEM	UNIT	EXISITNG PUMP STATION BUILDING QUANTITY	WELL HOUSE BUILDING QUANTITY	TOTAL QUANTITY
50102400	CONCRETE REMOVAL	CU YD	6.9	-	6.9
50200100	STRUCTURE EXCAVATION	CU YD	-	1825	1825
50300225	CONCRETE STRUCTURES	CU YD	11.3	378.3	389.6
50800105	REINFORCEMENT BARS	POUND	2360	63600	65960
50800515	BAR SPLICERS	EACH	-	57	57
51202100	FURNISHING STEEL PILES HP14X117	FOOT	-	960	960
51202305	DRIVING PILES	FOOT	-	960	960
51204100	TEST PILE STEEL HP14X117	EACH	-	1	1
X2090210	POROUS GRANULAR BACKFILL, SPECIAL	CU YD	-	3000	3000
Z0012754	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ FT	7	-	7
* Weight of Grade 50 Steel = 14360 lbs, Grade 36 Steel = 14330 lbs, Grade A53 Steel = 1530 lbs and Stainless Steel Grade 304L or 316 = 29580 lbs					



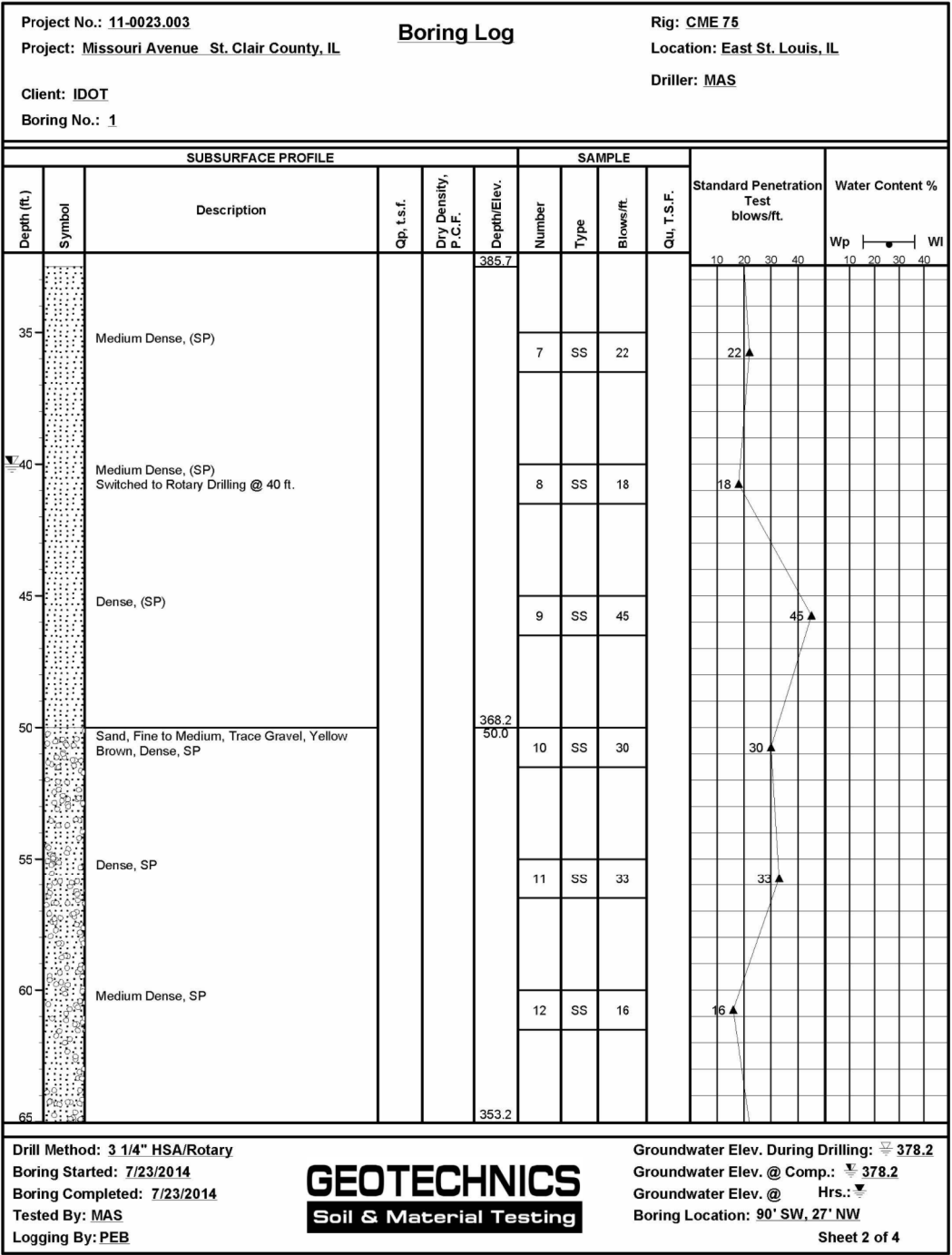
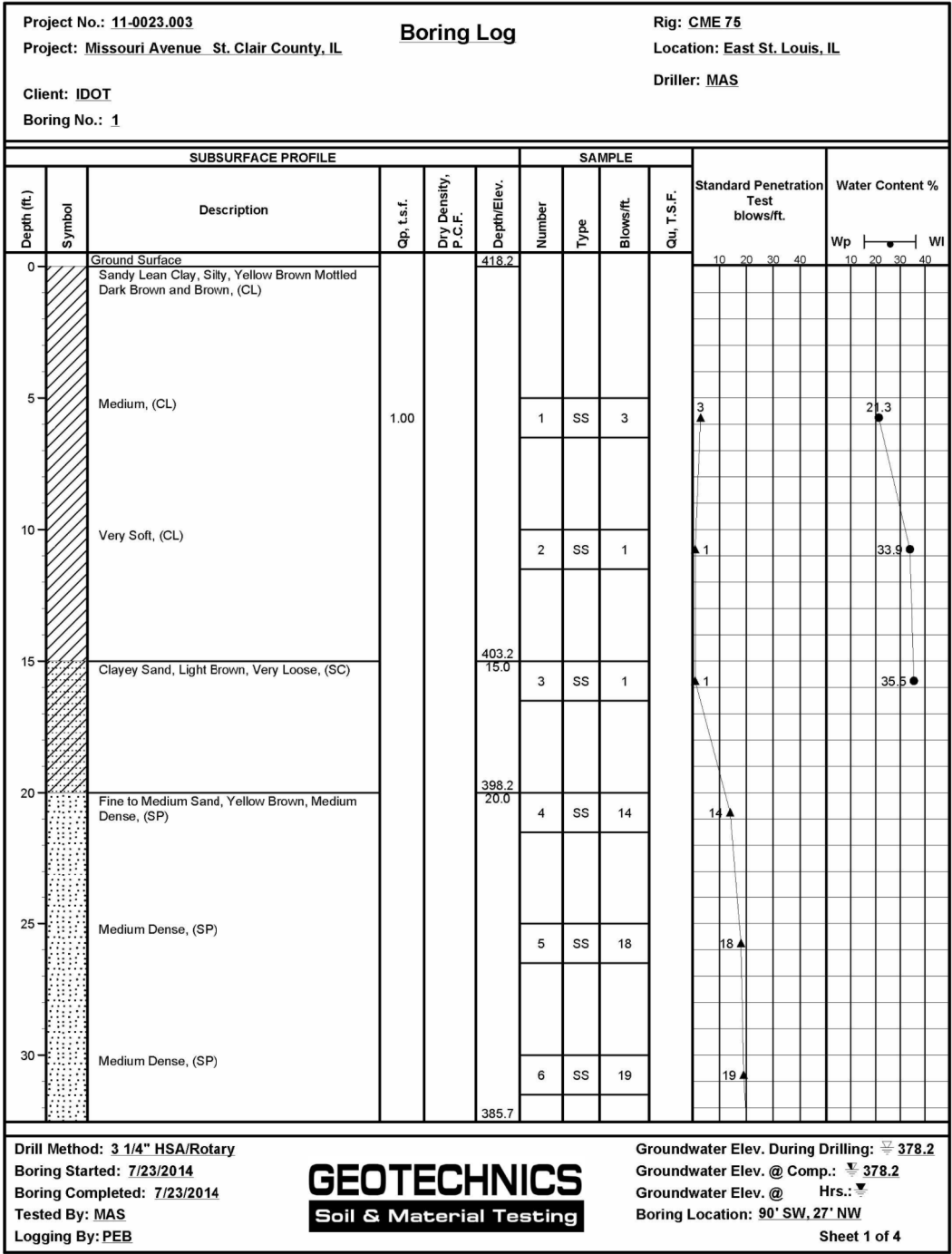
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PLOT DATE = 1/13/2015	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STRUCTURAL NOTES		
MISSOURI AVENUE DEEP WELL FACILITY		
SCALE: AS NOTED	SHEET 2 OF 2 SHEETS	STA. TO STA.

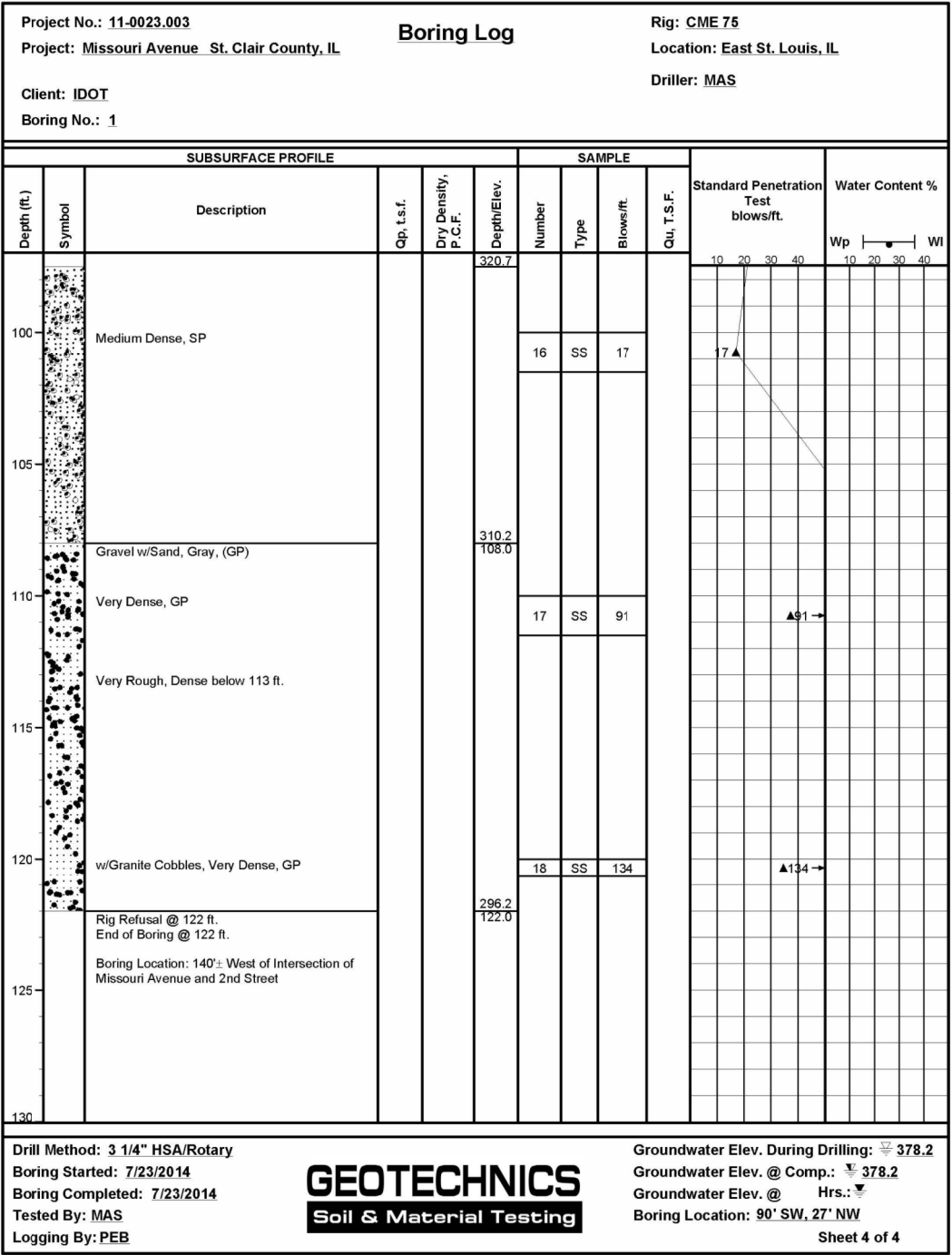
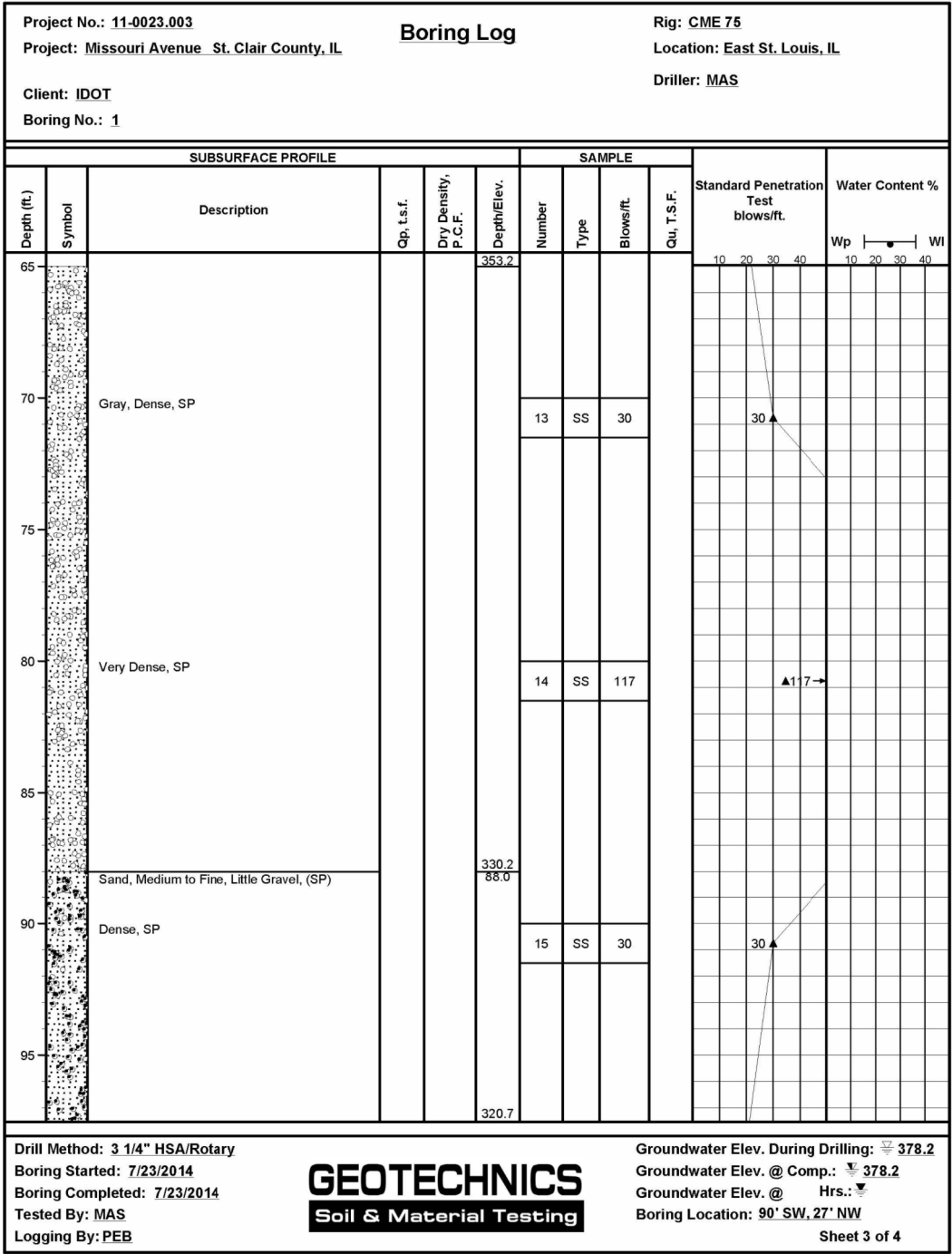
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55/70/64	82-4T-1	ST. CLAIR	185	76
CONTRACT NO. 76C99				
ILLINOIS FED. AID PROJECT				

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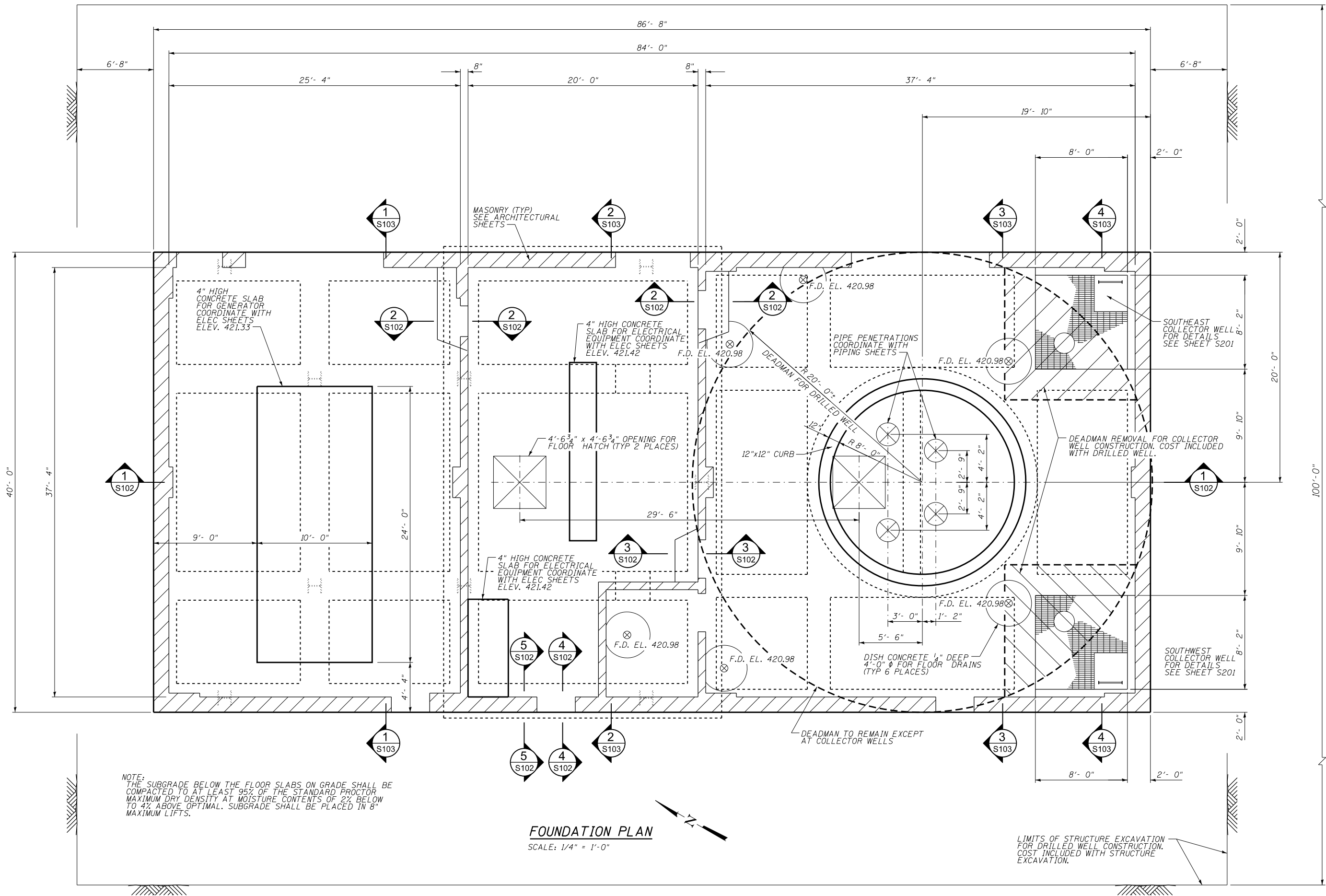
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BORING NO. 1

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NOTE:
THE SUBGRADE BELOW THE FLOOR SLABS ON GRADE SHALL BE
COMPACTED TO AT LEAST 95% OF THE STANDARD PROCTOR
MAXIMUM DRY DENSITY AT MOISTURE CONTENTS OF 2% BELOW
TO 4% ABOVE OPTIMAL. SUBGRADE SHALL BE PLACED IN 8"
MAXIMUM LIFTS.

FOUNDATION PLAN
SCALE: 1/4" = 1'-0"

LIMITS OF STRUCTURE EXCAVATION
FOR DRILLED WELL CONSTRUCTION.
COST INCLUDED WITH STRUCTURE
EXCAVATION.

KLINGNER
& ASSOCIATES, P.C.
Engineers • Architects • Surveyors

USER NAME : seb	DESIGNED - RJP	REVISED -
PLOT SCALE = 25.0007' / in.	DRAWN - BGJ	REVISED -
PLOT DATE = 1/14/2015	CHECKED - ADL	REVISED -
	DATE - 8/22/2014	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WELL HOUSE BUILDING - FOUNDATION PLAN
MISSOURI AVENUE DEEP WELL FACILITY

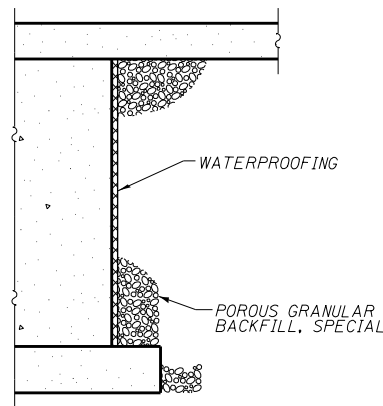
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CONTRACT NO. 76C99				
ILLINOIS FED. AID PROJECT				

S101

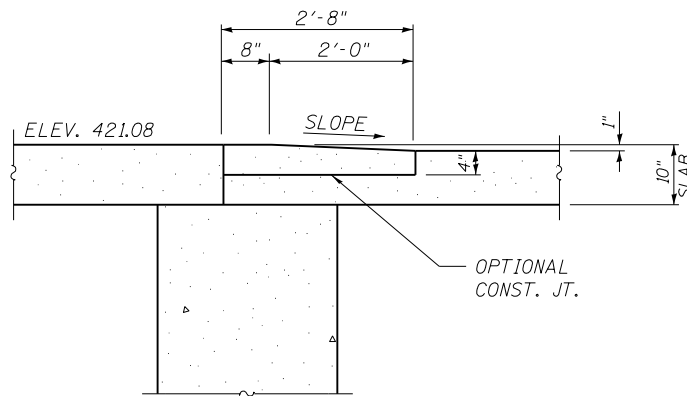
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LIMITS OF STRUCTURE EXCAVATION
FOR DRILLED WELL CONSTRUCTION.
COST INCLUDED WITH STRUCTURE
EXCAVATION.

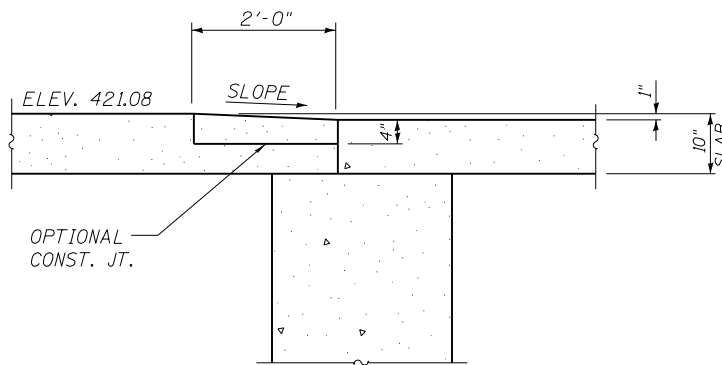


DETAIL A
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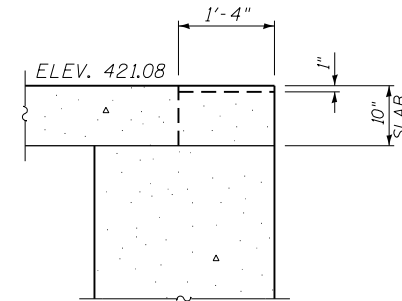
NOTE:
WATERPROOF AS PER SECTION 503
OF THE STANDARD SPECIFICATIONS.
COST INCLUDED WITH CONCRETE
STRUCTURES.



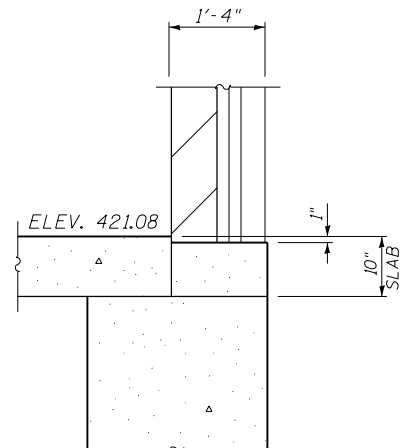
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3 SECTION
S102 SCALE: 3 / 4"=1'-0"



4 SECTION
S102 SCALE: 3 / 4"=1'-0"



5 SECTION
S102 SCALE: 3 / 4"=1'-0"

1 SECTION
S102 SCALE: 1/4"=1'-0"

BEDROCK
ELEV. ±296.00

KLINGNER
& ASSOCIATES, P.C.
Engineers • Architects • Surveyors

USER NAME = seb
DESIGNED - RJP
DRAWN - BGJ
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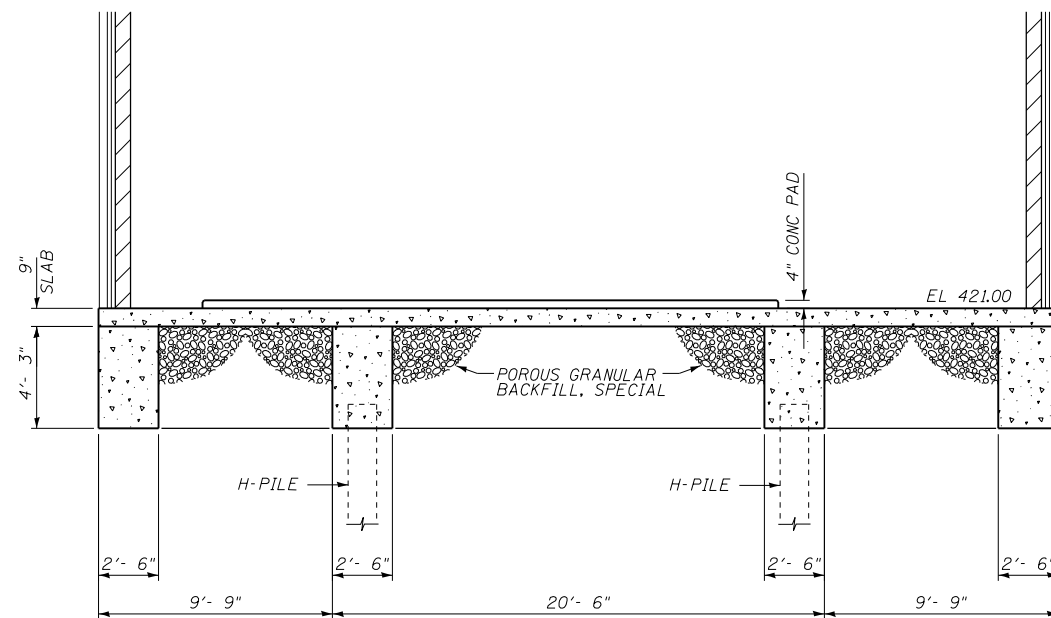
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WELL HOUSE BLDG - FOUNDATION DETAILS
MISSOURI AVENUE DEEP WELL FACILITY

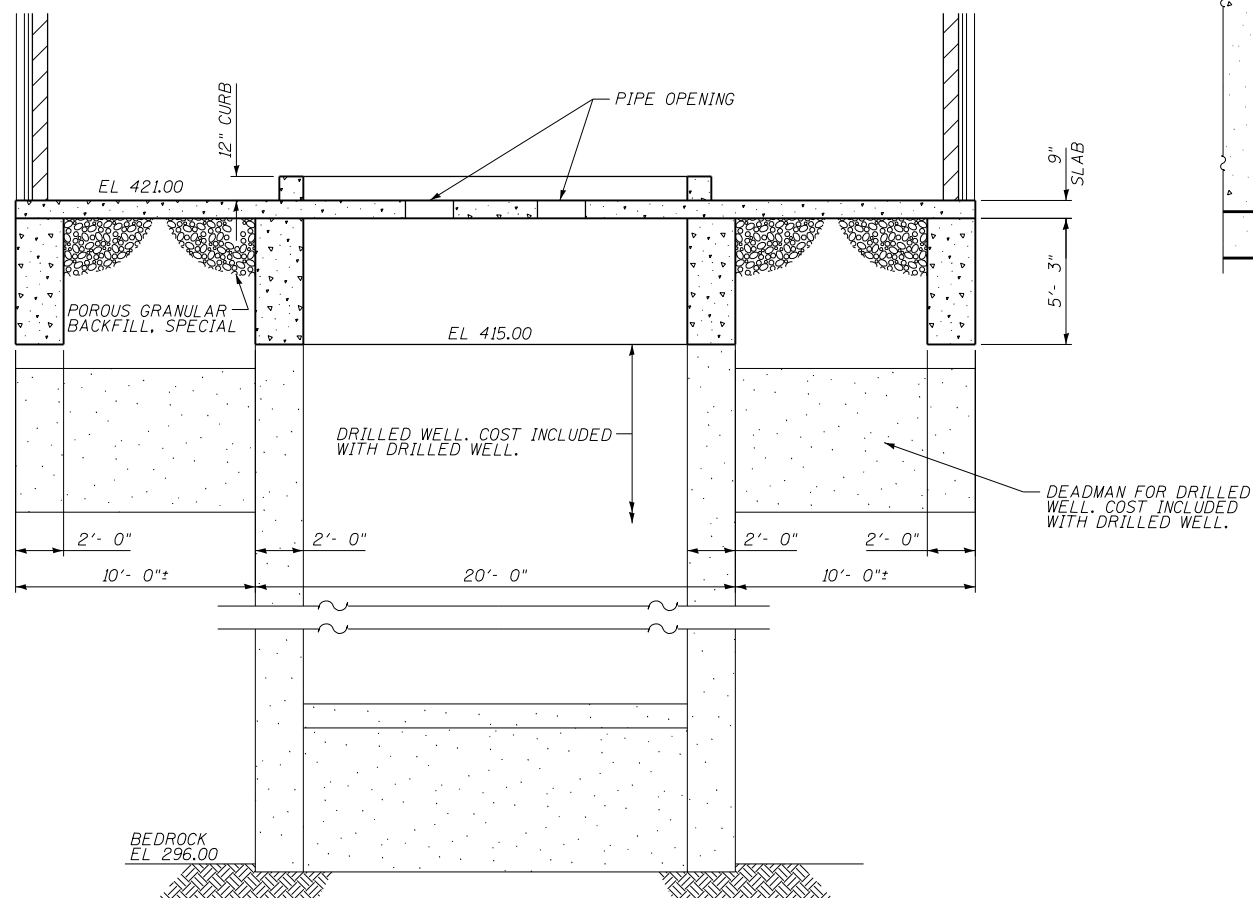
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 76C99				
ILLINOIS FED. AID PROJECT				

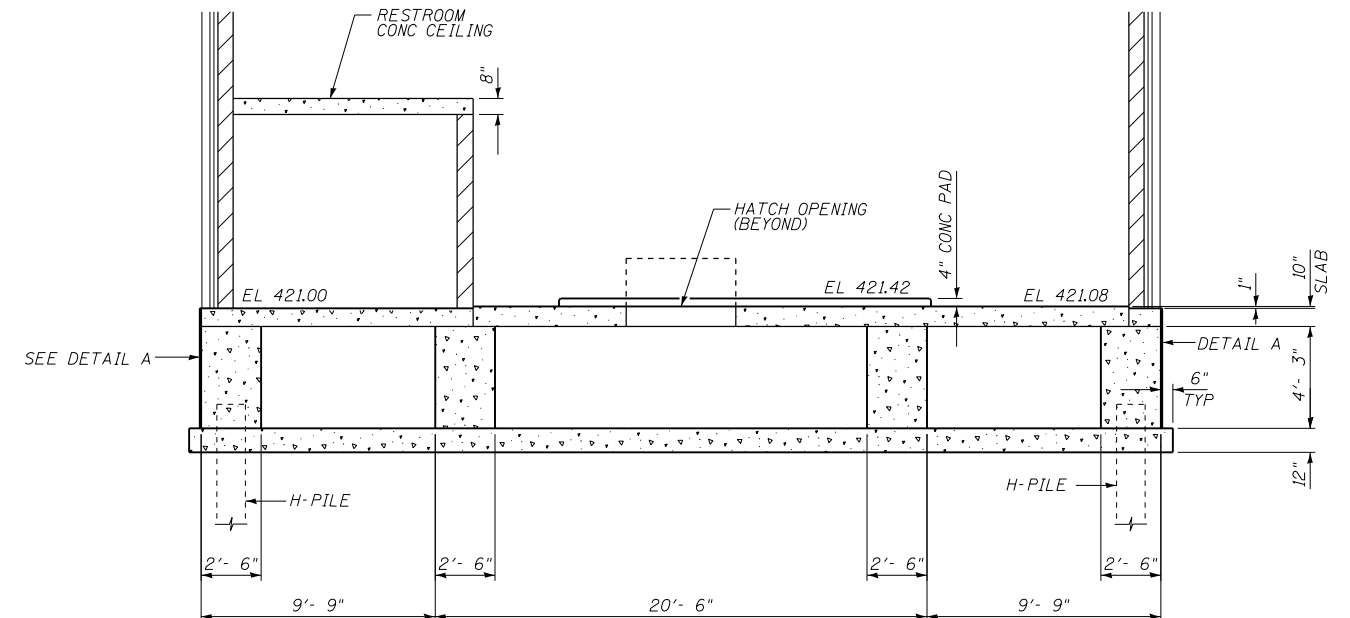
S102



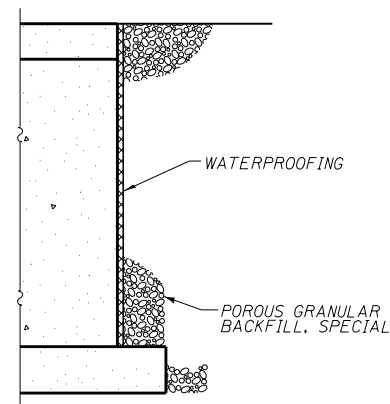
1 SECTION
S103 SCALE: 1/4"=1'-0"



3 SECTION
S103 SCALE: 1/4"=1'-0"

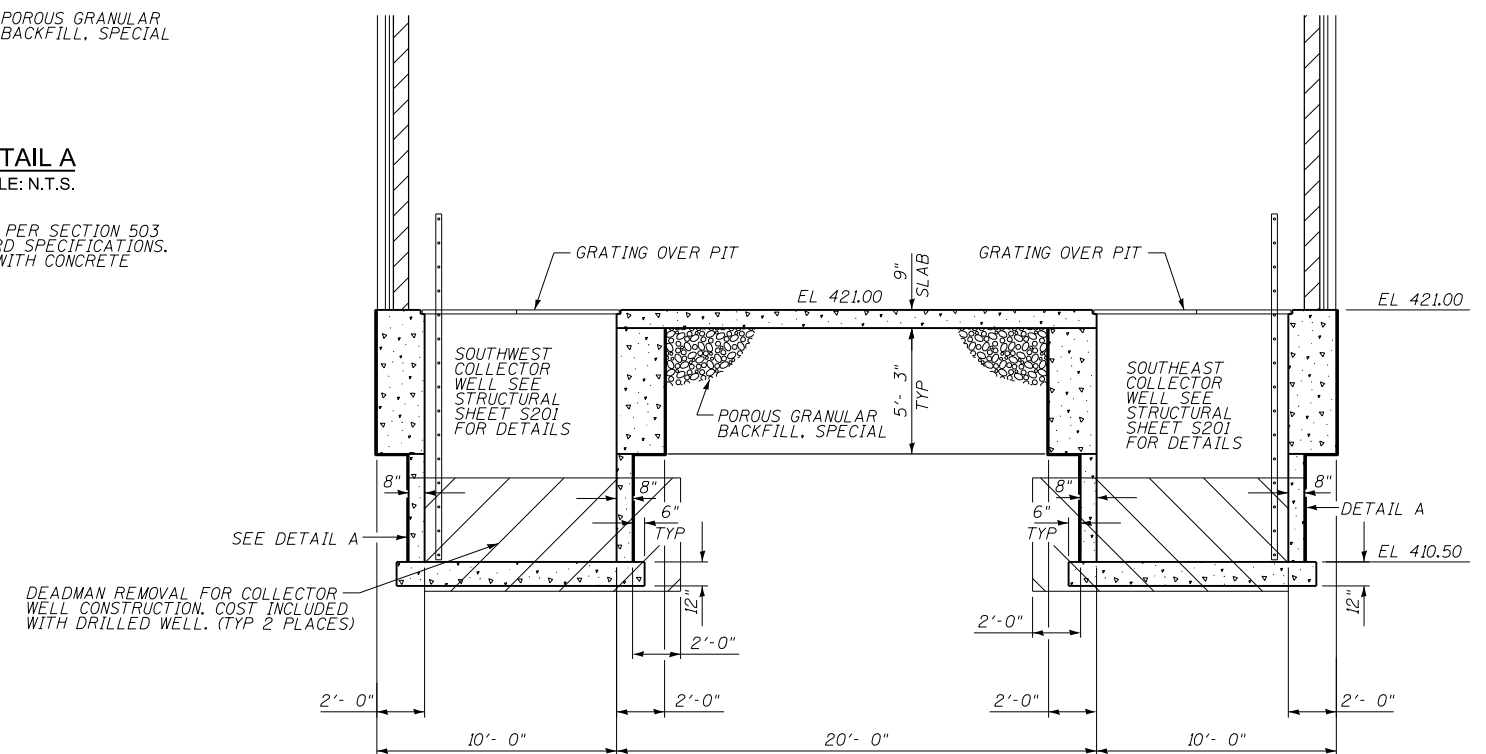


2 SECTION
S103 SCALE: 1/4"=1'-0"



DETAIL A
SCALE: N.T.S.

NOTE:
WATERPROOF AS PER SECTION 503
OF THE STANDARD SPECIFICATIONS.
COST INCLUDED WITH CONCRETE
STRUCTURES.

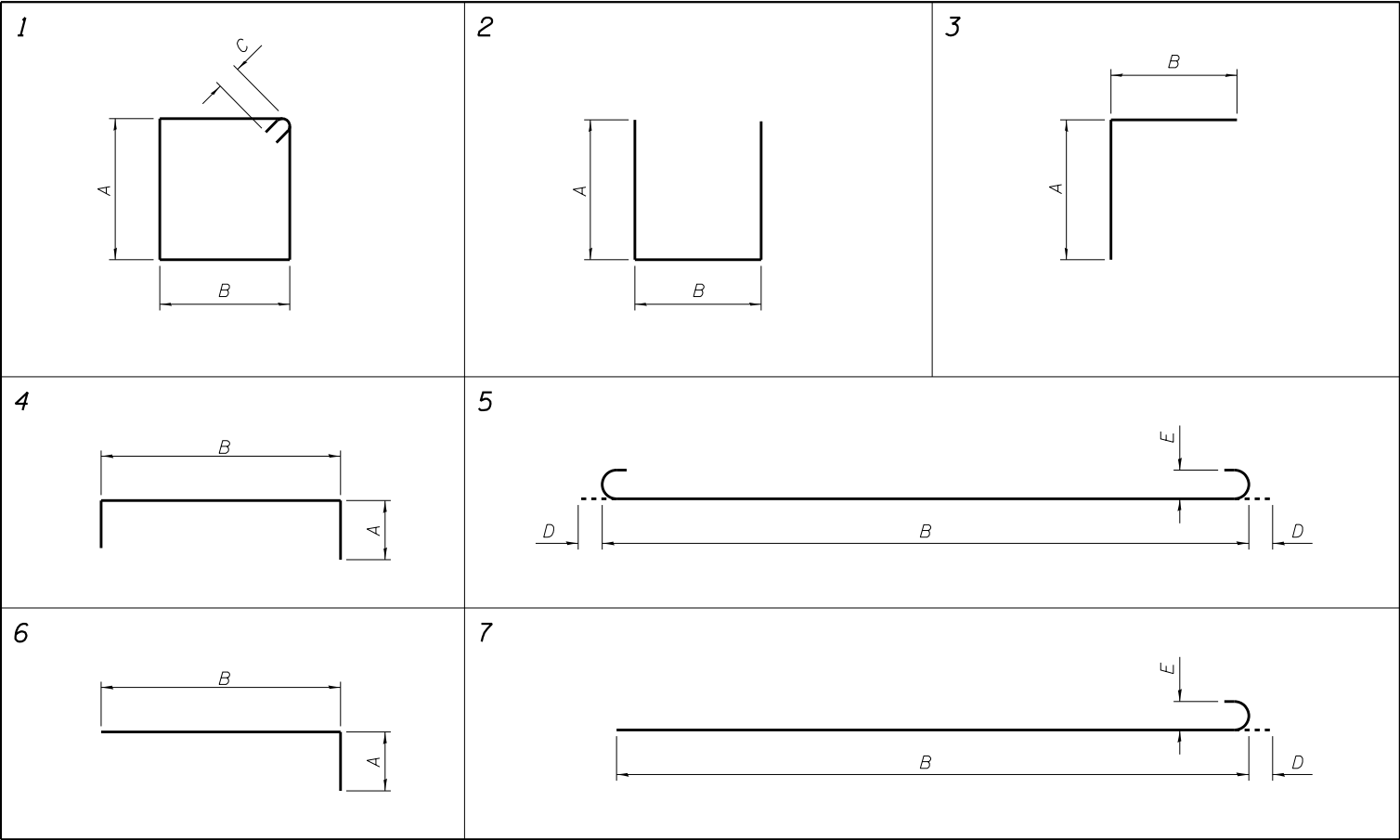


4 SECTION
S103 SCALE: 1/4"=1'-0"

REINFORCEMENT BAR SCHEDULE

BAR MARK	NO.	SIZE	LENGTH	BEND TYPE	WT. LBS.	A	B	C	D	E
A1	176	#5	39'-8"		7,282					
A2	108	#5	27'-0"		3,041					
A3	114	#5	30'-3"		3,597					
A4	11	#4	23'-8"		174					
A5	25	#4	9'-8"		161					
A6	32	#5	8'-0"		267					
A7	64	#4	4'-0"		171					
A8	54	#5	40'-8"		2,290					
A9	82	#5	23'-10"		2,039					
A10	44	#5	10'-0"		459					
A11	44	#5	9'-10"		451					
A12	18	#4	9'-8"		116					
A13	22	#4	8'-4"		122					
A14	40	#4	2'-6"		67					
A15	3	#4	15'-2"		30					
A16	4	#4	8'-2"		22					
A17	9	#4	3'-2"		19					
A18	16	#4	2'-0"		21					
A19	16	#4	3'-0"		32					
A20	32	#4	2'-6"		53					
H1	80	#4	8'-11"		477					
H2	52	#5	39'-8"		2,151					
H3	72	#5	30'-3"		2,272					
H4	16	#5	27'-4"		456					
H5	64	#5	6'-0"		401					
L1	164	#6	6'-0"	3	1,478	3'-0"	3'-0"			
L2	80	#4	4'-0"	3	214	2'-0"	2'-0"			
L3	20	#4	2'-10"	3	38	10"	2'-0"			
L4	86	#4	2'-8"	3	153	8"	2'-0"			
P1	30	#8	41'-6"	5	3,324		39'-8"		11"	8"
P2	32	#8	33'-9"	7	2,884		32'-10"		11"	8"
P3	16	#8	37'-10"	5	1,616		36'-0"		11"	8"
P4	20	#9	42'-10"	4	2,913	1'-7"	39'-8"			
P5	16	#8	42'-4"	4	1,808	1'-4"	39'-8"			
P6	7	#10	43'-4"	4	1,305	1'-10"	39'-8"			
P7	3	#9	20'-6"	5	209		18'-0"		1'-3"	11 ³ / ₄ "
P8	20	#10	35'-10"	6	3,084	1'-10"	34'-0"			
P9	24	#9	33'-10"	6	2,761	1'-7"	32'-3"			
P10	12	#9	35'-7"		1,452					
P11	16	#8	29'-10"	6	1,274	1'-4"	28'-6"			
P12	16	#8	30'-9"		1,314					
S1	23	#5	13'-7"	1	326	4'-8"	1'-8"	5 ¹ / ₂ "		
S2	93	#5	14'-7"	1	1,416	4'-8"	2'-2"	5 ¹ / ₂ "		
S3	153	#5	16'-7"	1	2,646	5'-8"	2'-2"	5 ¹ / ₂ "		
S4	201	#5	15'-7"	1	3,267	5'-8"	1'-8"	5 ¹ / ₂ "		
S5	17	#4	6'-5"	1	73	1'-8"	1'-2"	4 ¹ / ₂ "		
U1	76	#4	5'-10"	2	296	2'-9"	4"			
V1	152	#4	5'-10"	7	592		5'-4"		6"	4"
V2	155	#7	6'-10"		2,165					
V3	57	#8	5'-5"	7	824		4'-6"		11"	8"
Reinforcement Bars				Pound	63,600					

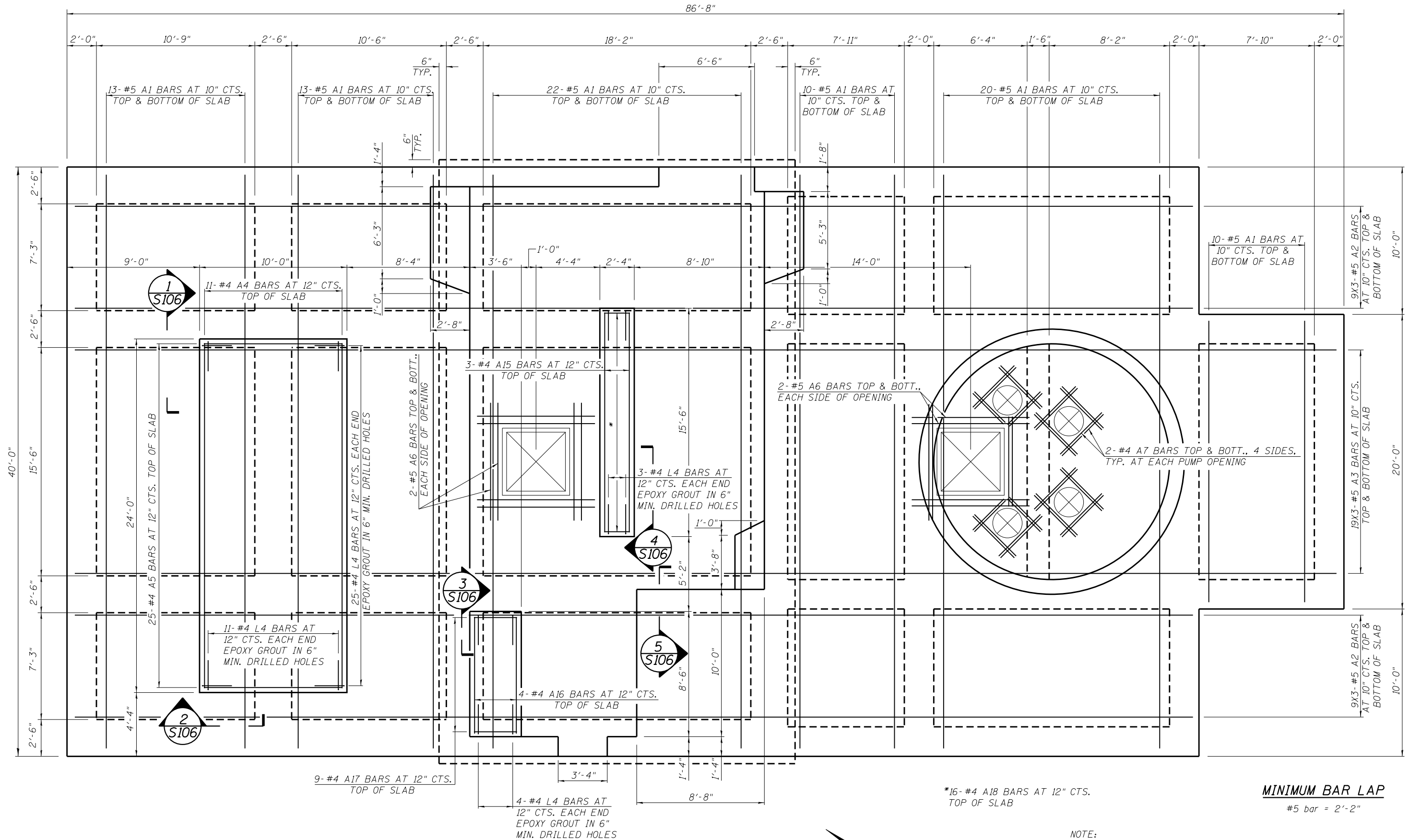
REINFORCEMENT BEND TYPES



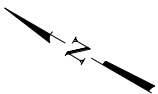
NOTES:
ALL DIMENSIONS ARE OUT-TO-OUT OF BAR EXCEPT "C" AND "E" ON STANDARD 180° AND 135° HOOKS.
CHAIRS, BOLSTERS AND STANDEES ARE NOT INCLUDED IN BAR SCHEDULE AND SHALL BE INCLUDED
IN THE COST OF REINFORCEMENT BARS.

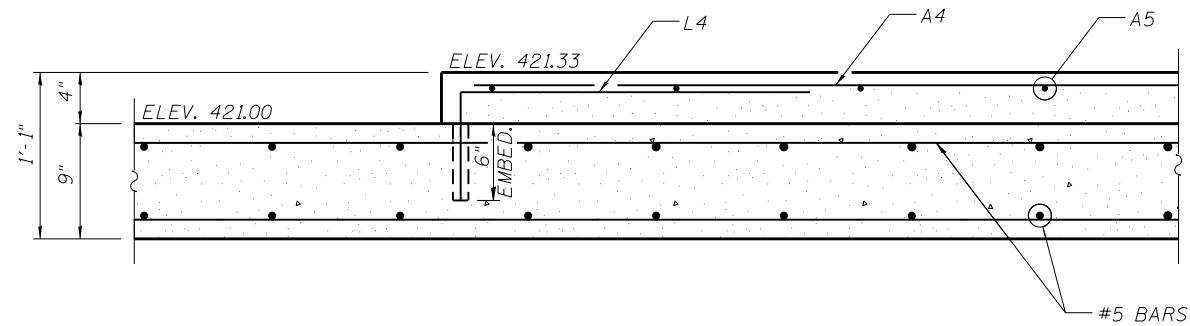
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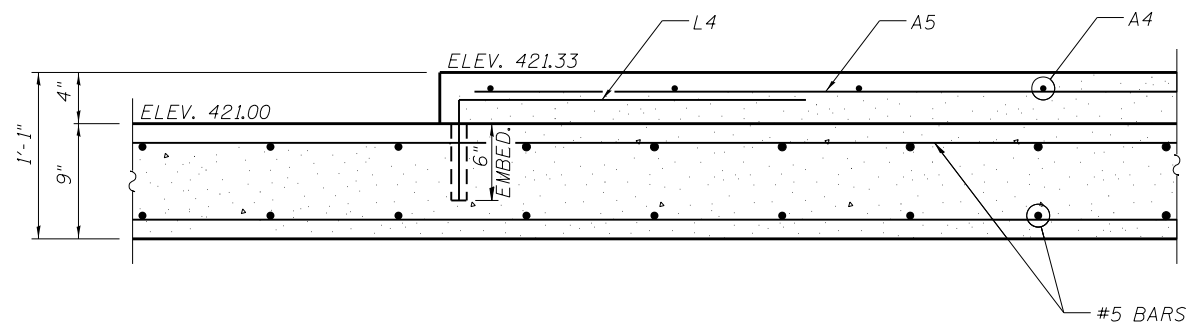


CONCRETE SLAB PLAN

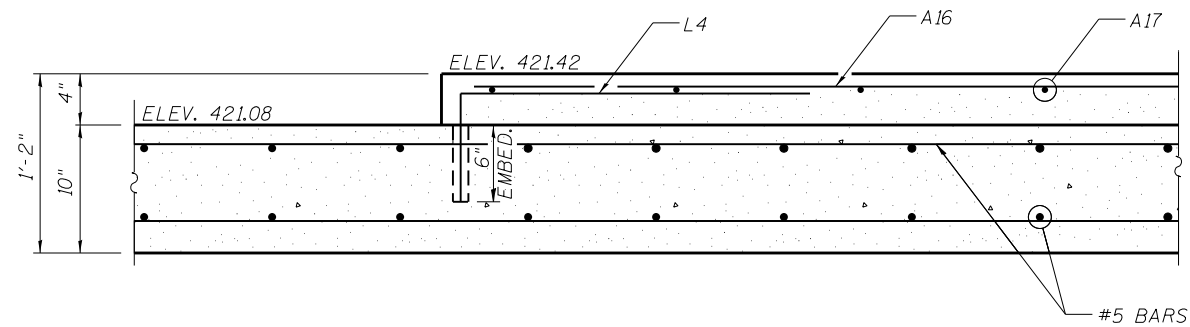




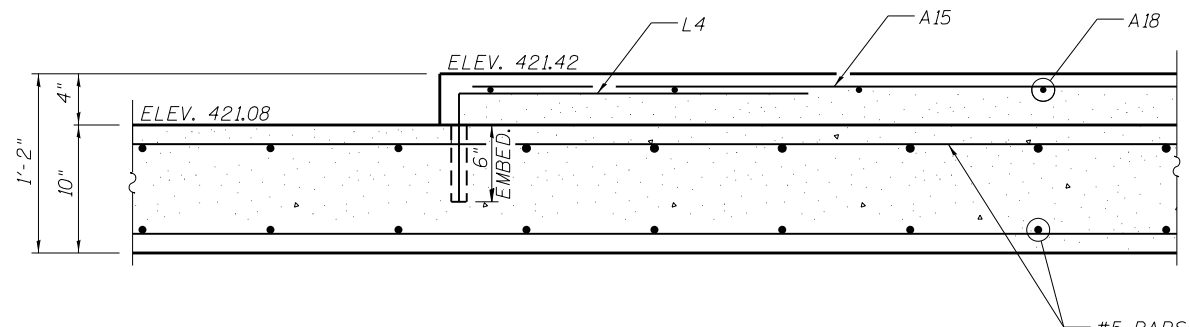
SECTION 1
S106



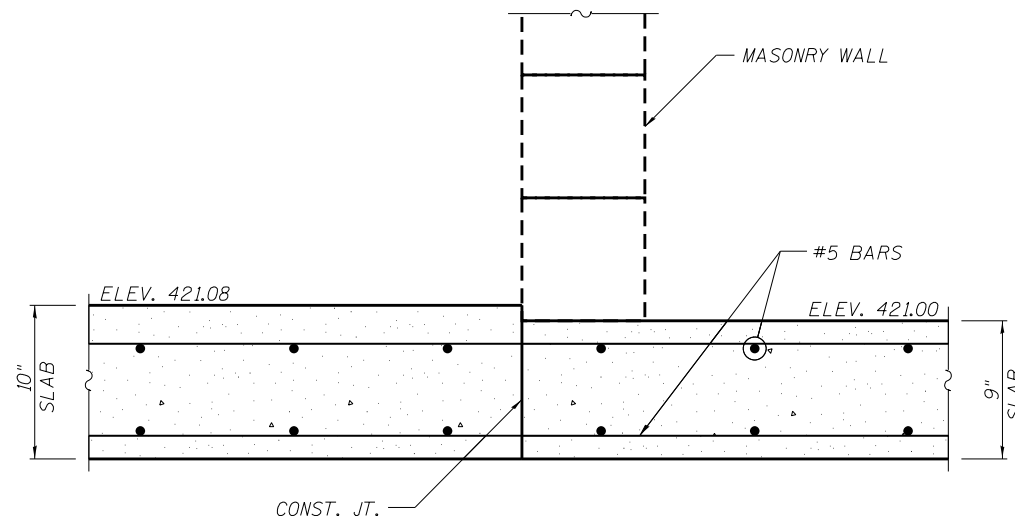
SECTION 2
S106



SECTION 3
S106



SECTION 4
S106



SECTION 5
S106

FILE NAME = G:\11\Files\110023\Work Order 6\CADD Sheets\Grade Beam Plans.dgn

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PLOT DATE = 1/14/2015	CHECKED - RJP	REVISED -
	DATE - ADL	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WELL HOUSE BLDG - HOUSEKEEPING PAD DETAILS
MISSOURI AVENUE DEEP WELL FACILITY

SCALE: SHEET 6 OF 23 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55/70/64	82-4T-1	ST. CLAIR	185	84
CONTRACT NO. 76G99				
ILLINOIS FED. AID PROJECT				

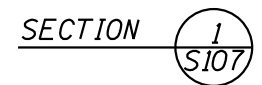
S106

#5 bar = 2'-2"
#6 bar = 2'-7"
#7 bar = 3'-5"
#8 bar = 4'-6"
#9 bar = 5'-9"
#10 bar = 7'-3"



TYPE: STEEL HP 14 X 117
NOMINAL REQUIRED BEARING: 929 KIPS/PILE
FACTORED RESISTANCE AVAILABLE: 510 KIPS/PILE
EST. LENGTH: 120 FEET/PILE
NO. PRODUCTION PILES: 8
NO. TEST PILES: 1

NOTE:
BARS INDICATED THUS 4X2-#8 ETC. INDICATES
4 LINES OF BARS WITH 2 LENGTHS PER LINE.



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PLOT SCALE = 25.0007' / in.	CHECKED = RJP	REVISED =
PLOT DATE = 1/14/2015	DATE = ADL	REVISED =

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

WELL HOUSE BLDG – GRADE BEAM BOTTOM PLAN
MISSOURI AVENUE DEEP WELL FACILITY

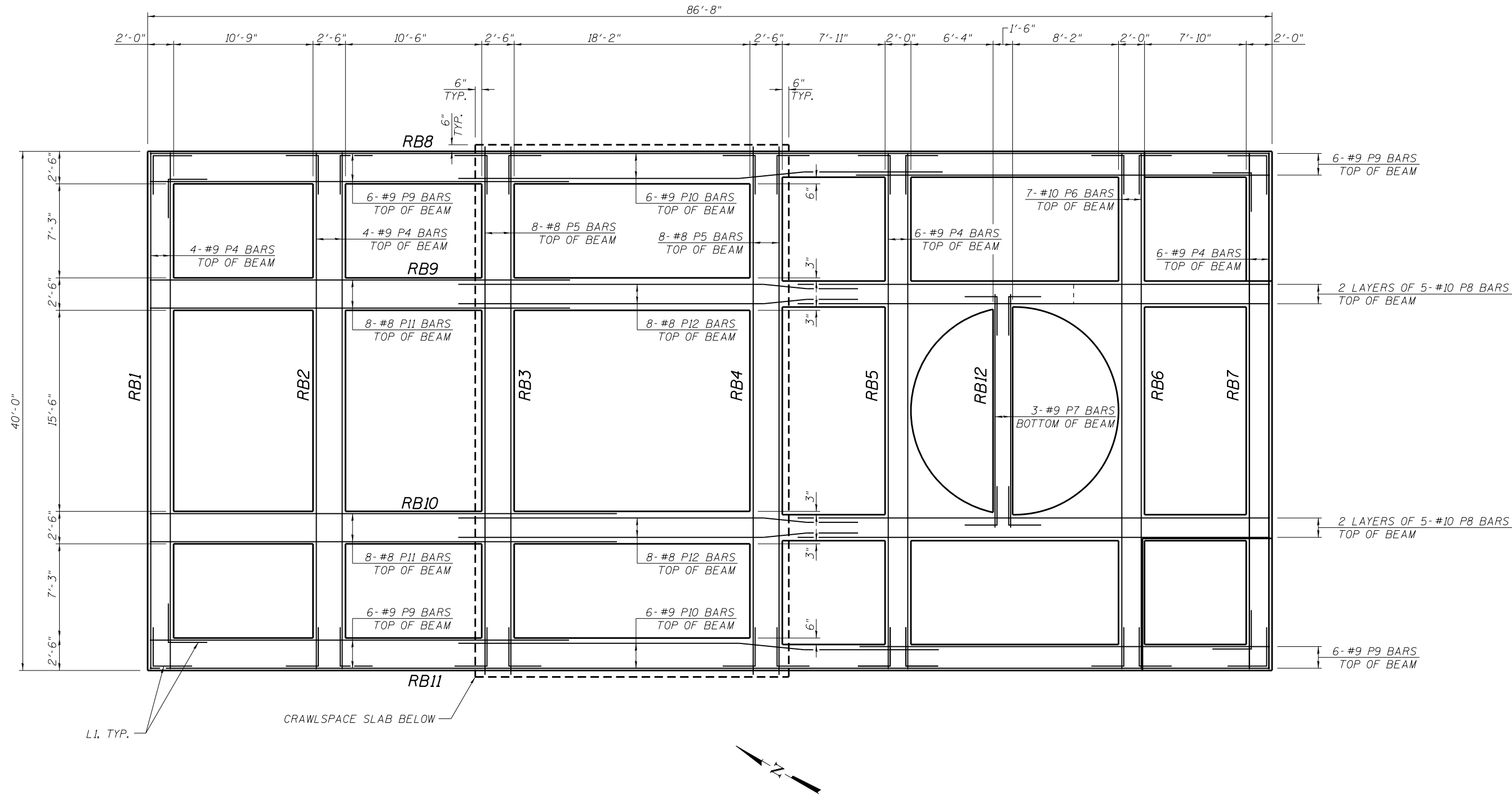
SCALE:	SHEET 7 OF 23 SHEETS	STA.	TO STA.
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55/70/64	82-4T-1	ST. CLAIR	185	85
		CONTRACT NO. 76C99		
		ILLINOIS FED. AID PROJECT		

S107

MINIMUM BAR LAP

- #5 bar = 2'-2"
- #6 bar = 2'-7"
- #7 bar = 3'-5"
- #8 bar = 4'-6"
- #9 bar = 5'-9"
- #10 bar = 7'-3"



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PLOT DATE = 1/14/2015	CHECKED - RJP	REVISED -
	DATE - ADL	REVISED -

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DEPARTMENT OF TRANSPORTATION

WELL HOUSE BLDG - GRADE BEAM TOP PLAN
MISSOURI AVENUE DEEP WELL FACILITY

SCALE: SHEET 8 OF 23 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55/70/64	82-4T-1	ST. CLAIR	185	86
CONTRACT NO. 76C99				
ILLINOIS FED. AID PROJECT				

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PLOT DATE = 1/14/2015

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DATE - ADL

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REVISED -
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

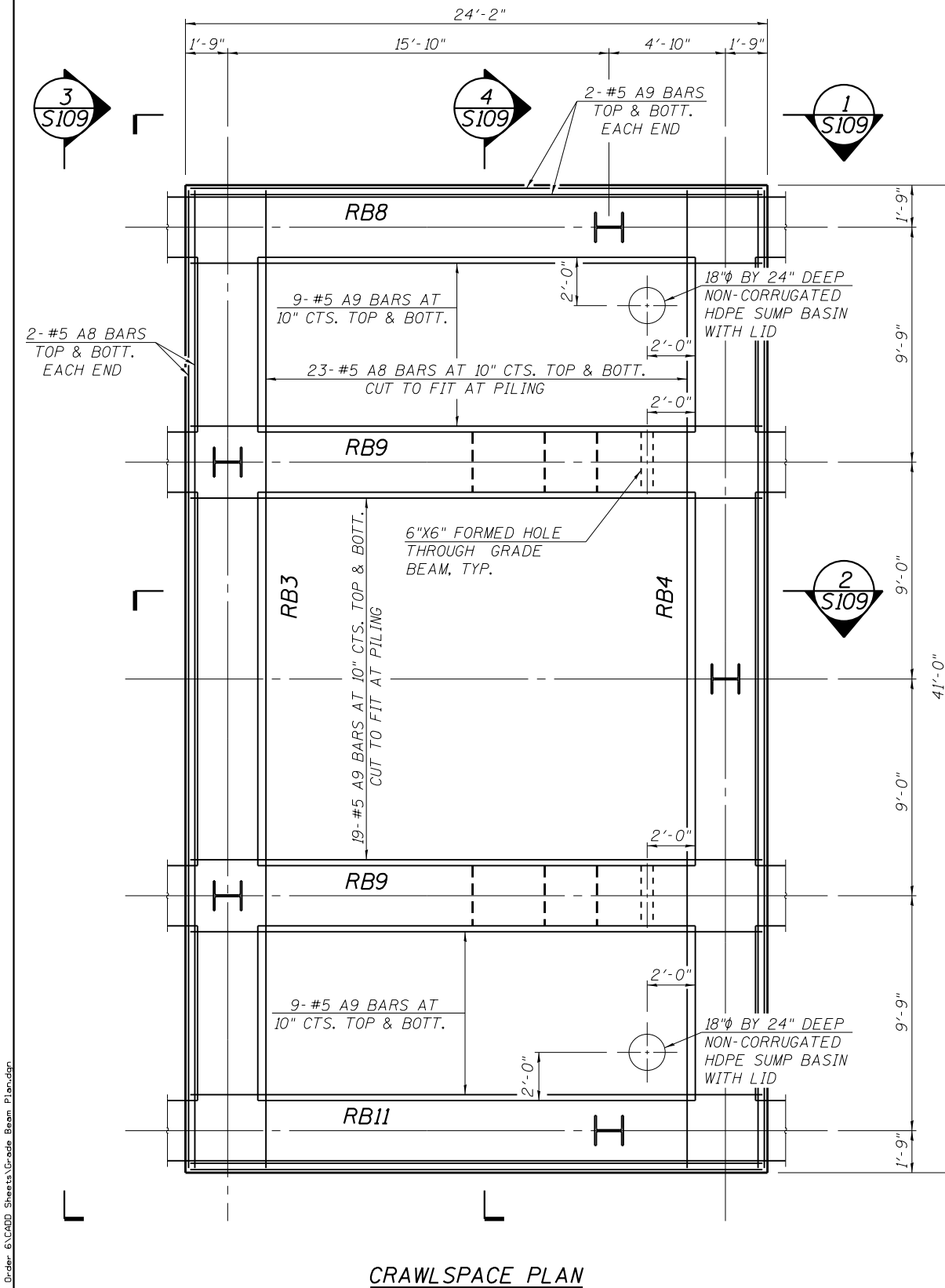
WELL HOUSE BLDG - CRAWLSPACE PLAN
MISSOURI AVENUE DEEP WELL FACILITY

SCALE: SHEET 9 OF 23 SHEETS STA. TO STA.

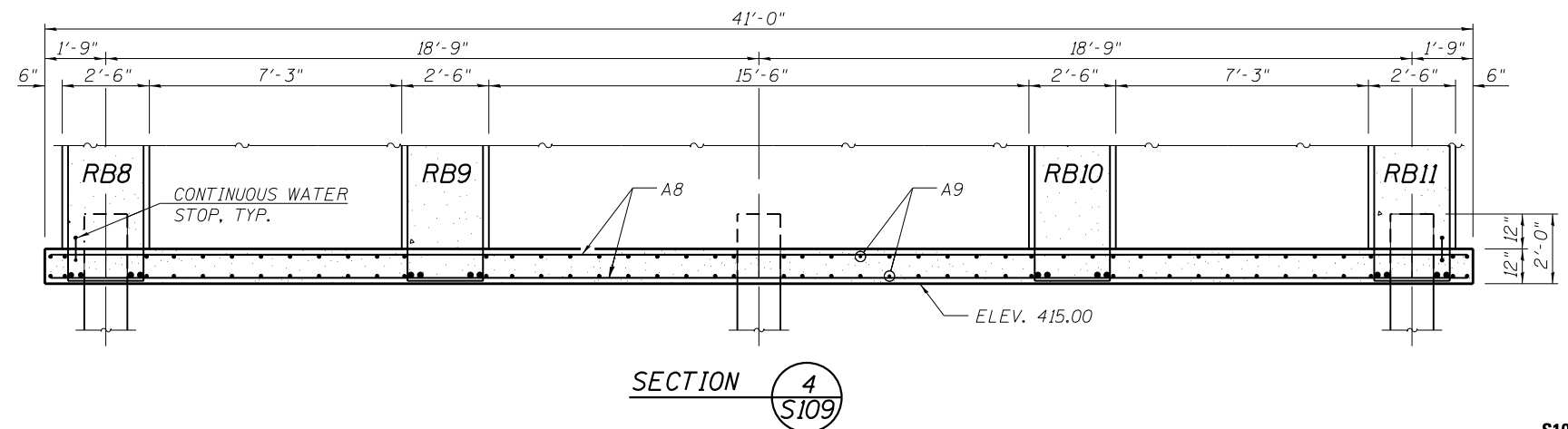
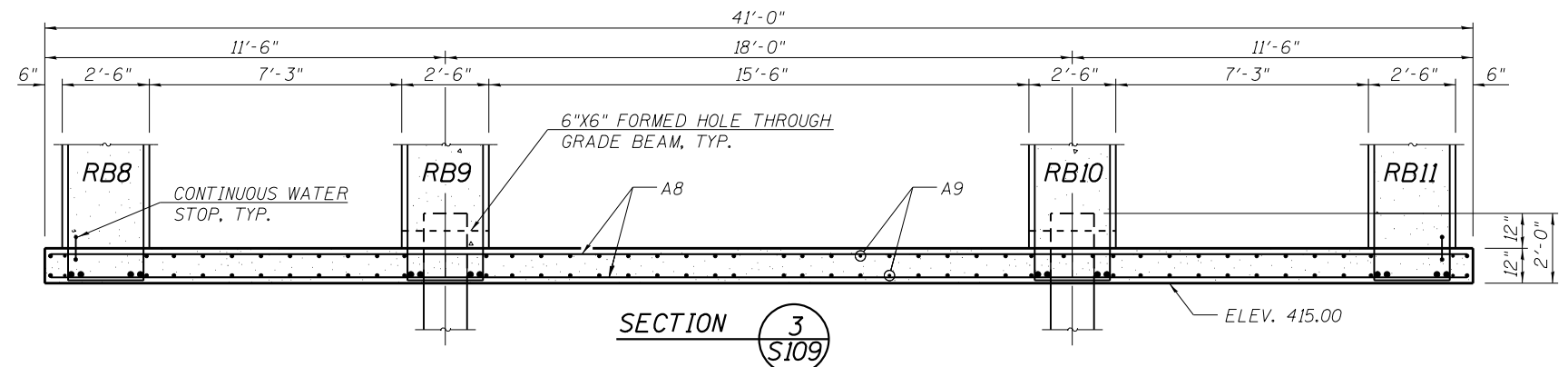
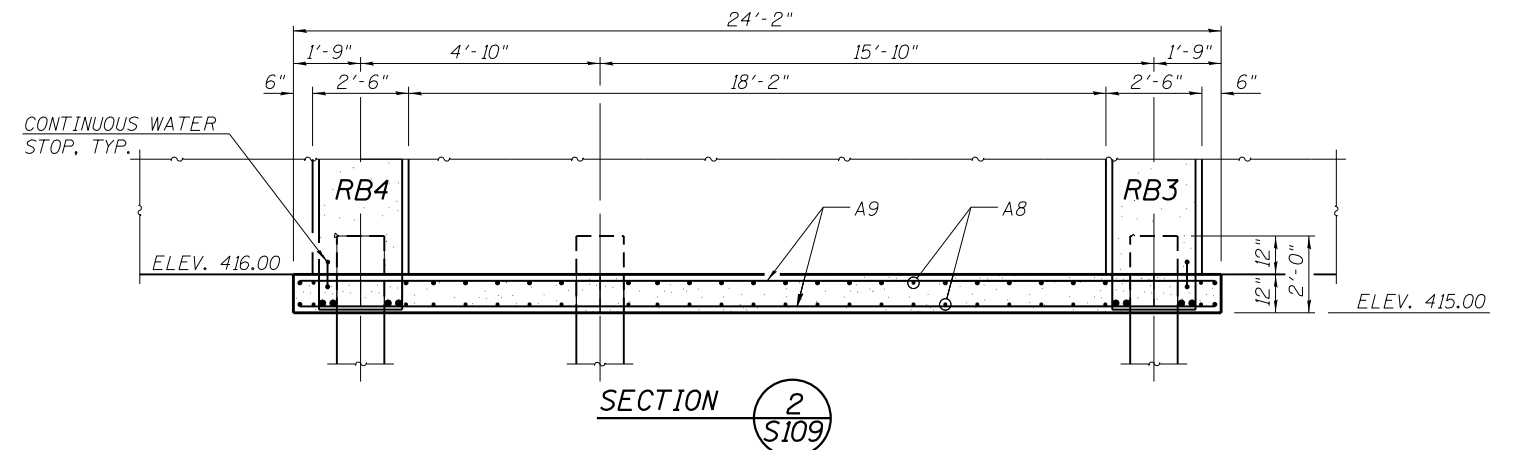
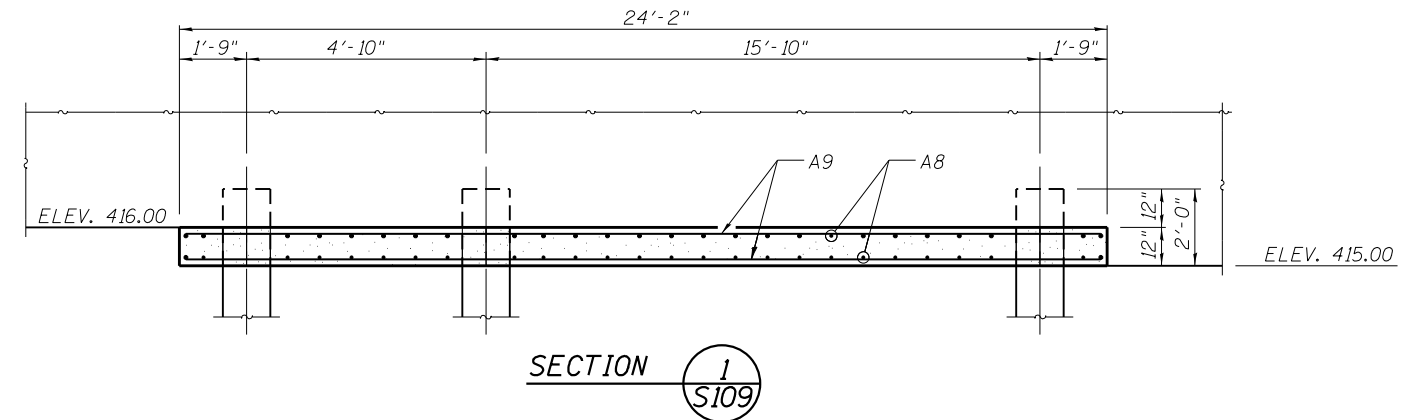
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55/70/64	82-4T-1	ST. CLAIR	185	87
CONTRACT NO. 76C99				
ILLINOIS FED. AID PROJECT				

S109

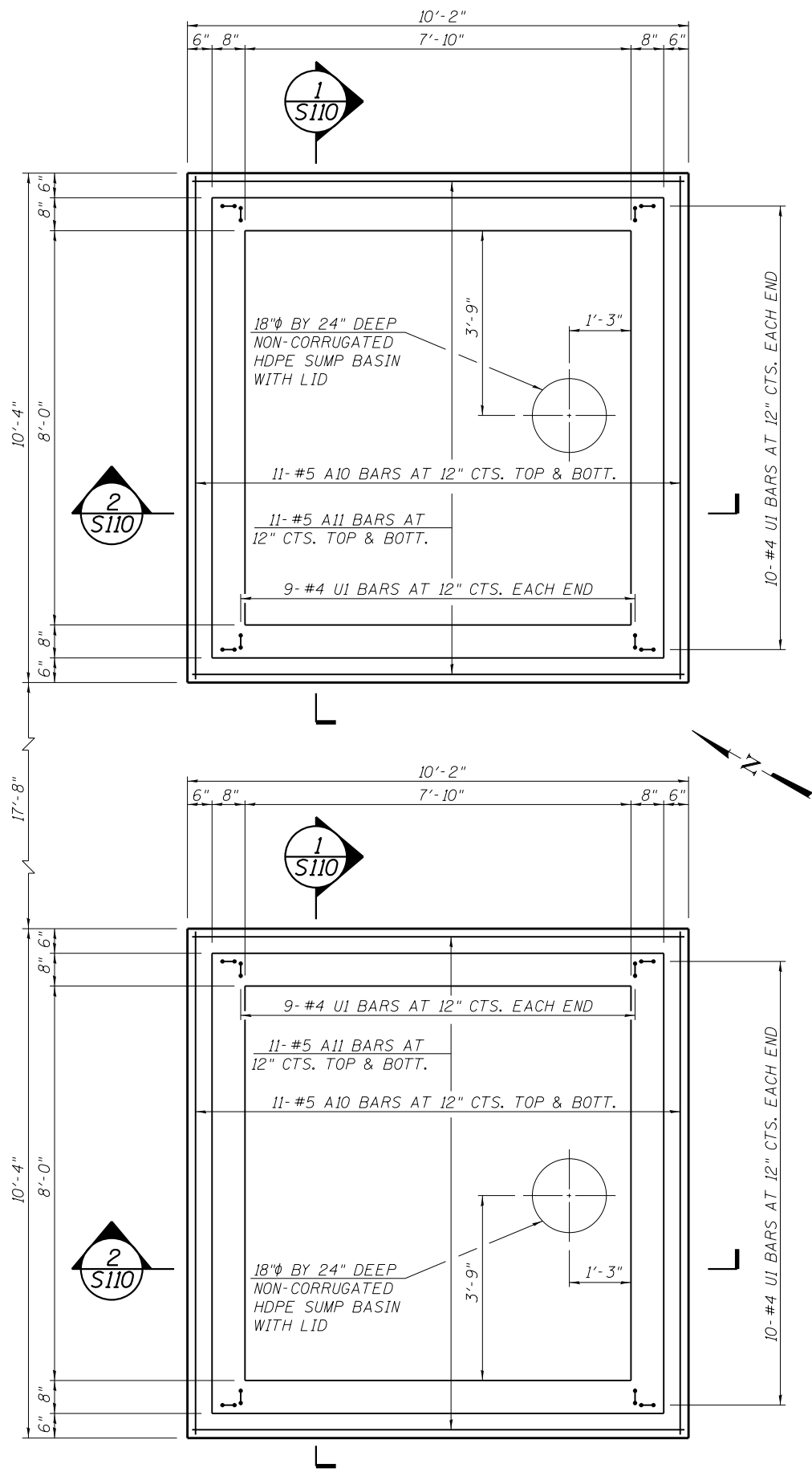
NOTES:
FOR REINFORCEMENT IN BEAMS,
SEE BEAM DETAIL SHEETS.
COST OF SUMP PITS AND
CONTINUOUS WATER STOPS
INCLUDED WITH CONCRETE
STRUCTURES.
COORDINATE OPENINGS IN
RB3, RB4, RB8 & RB11 WITH
ELECTRICAL & MECHANICAL
CONTRACTOR. COST OF
OPENINGS INCLUDED WITH
CONCRETE STRUCTURES.



CRAWLSPACE PLAN

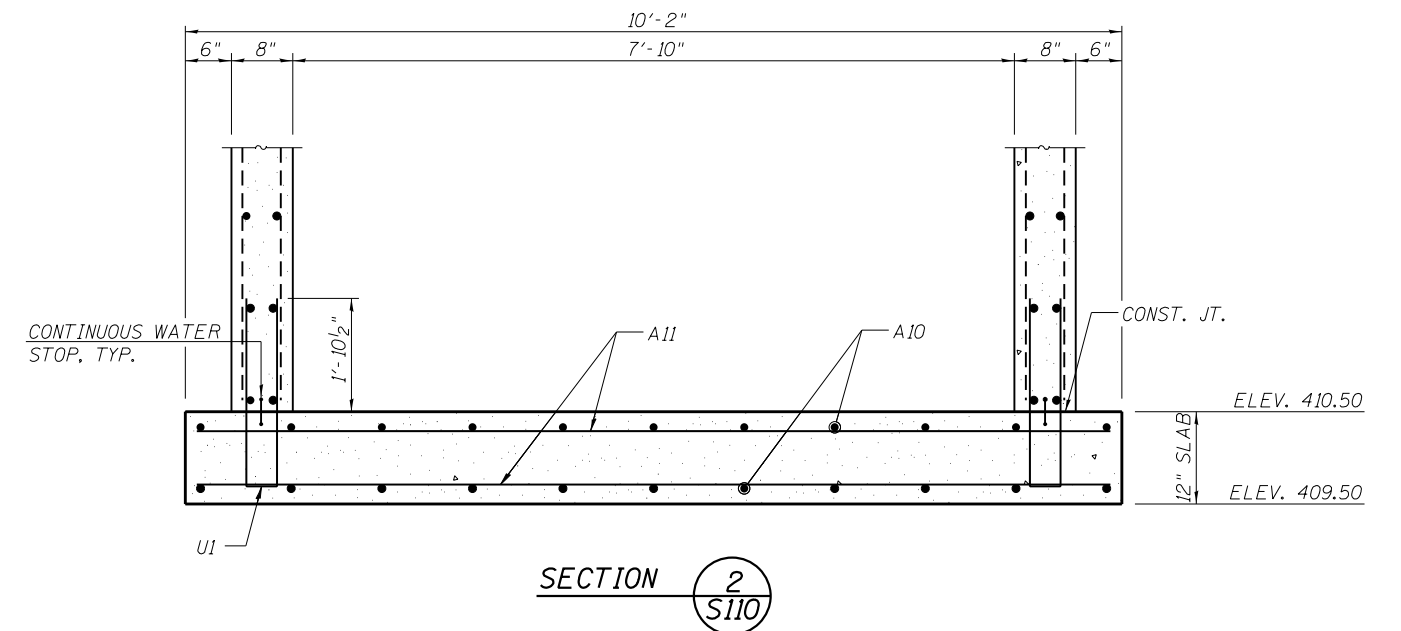
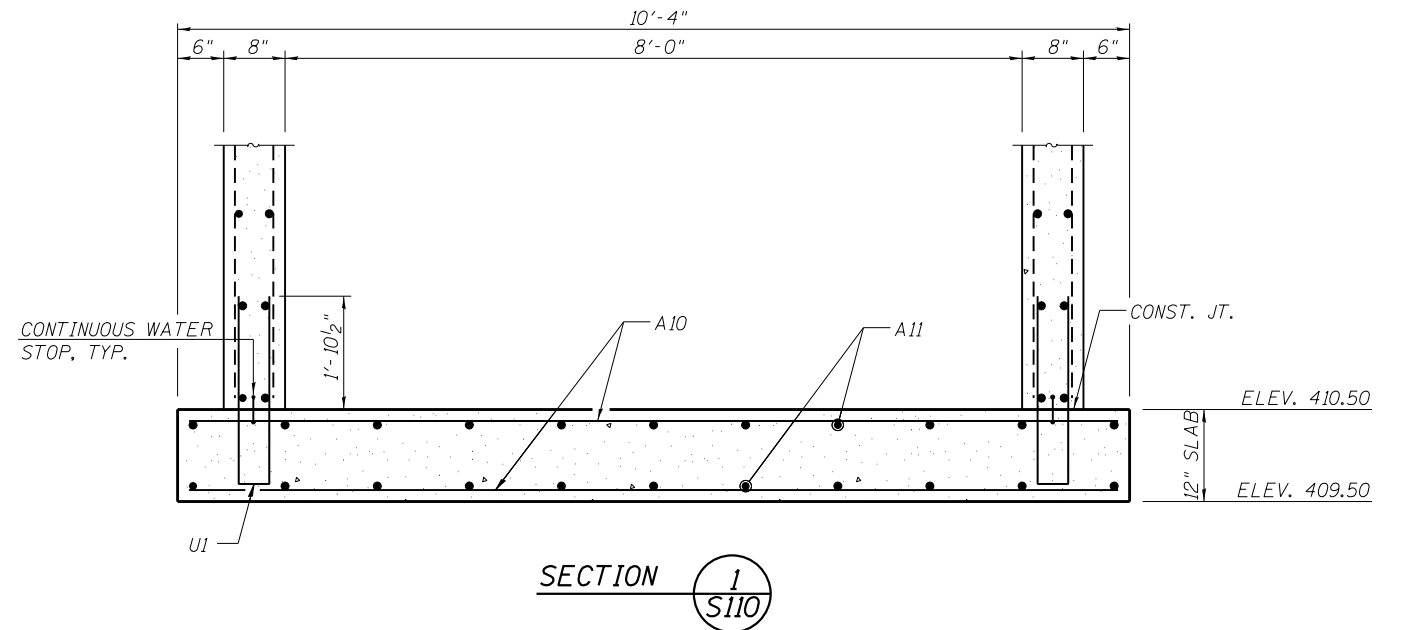


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COLLECTOR WELL SLAB PLAN

NOTE:
COST OF SUMP PITS AND CONTINUOUS
WATER STOPS INCLUDED WITH
CONCRETE STRUCTURES.



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	DATE - ADL	REVISED -

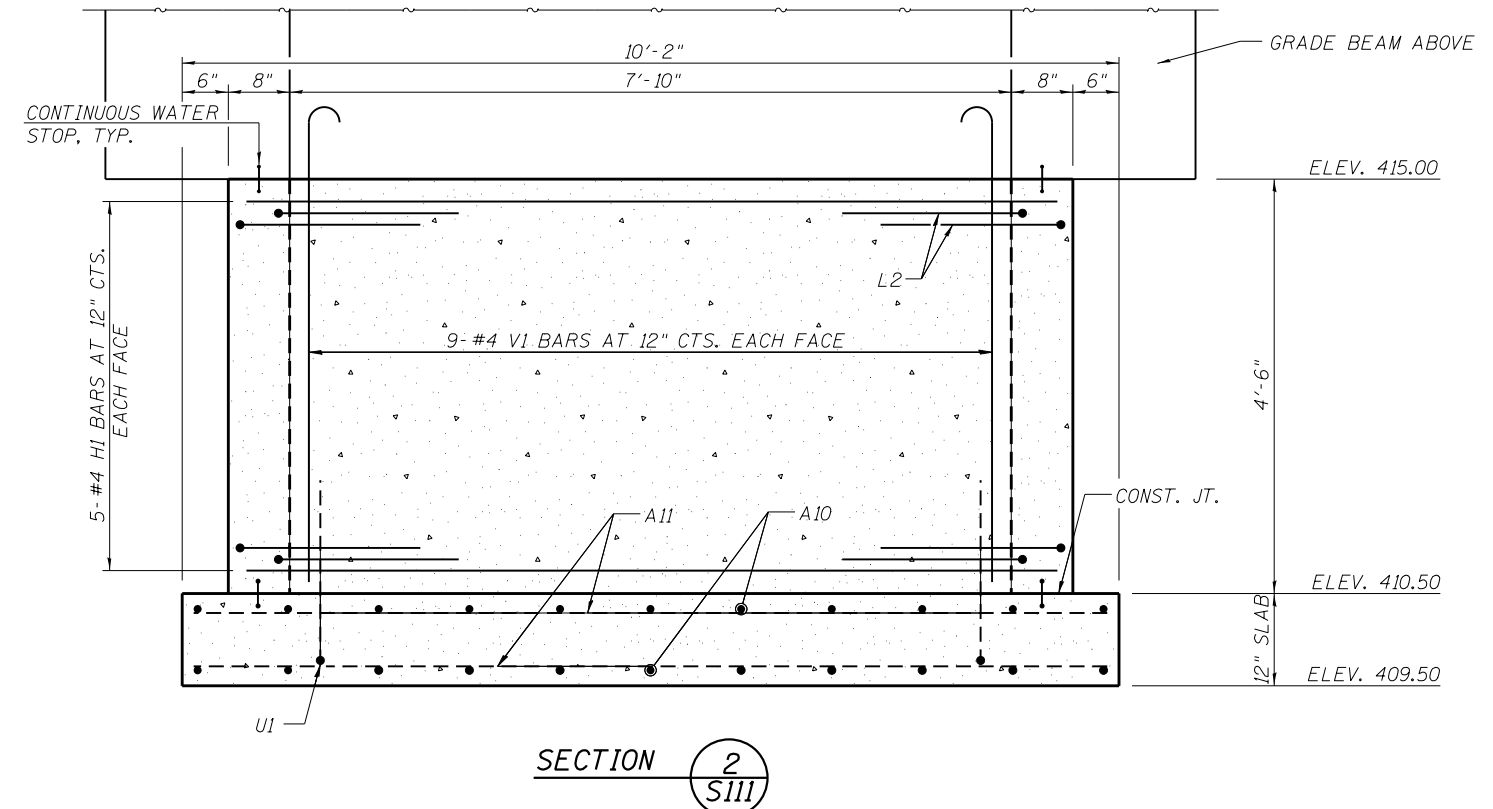
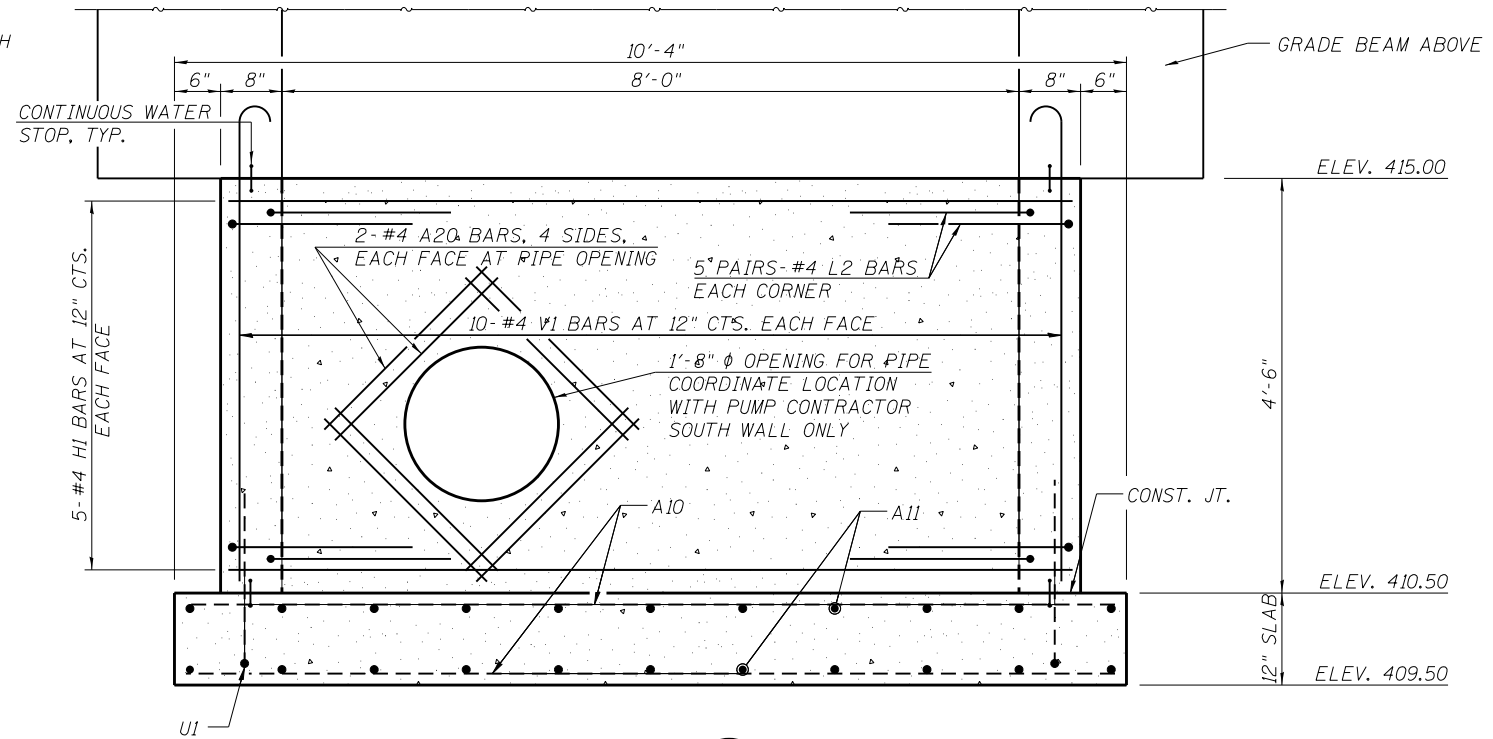
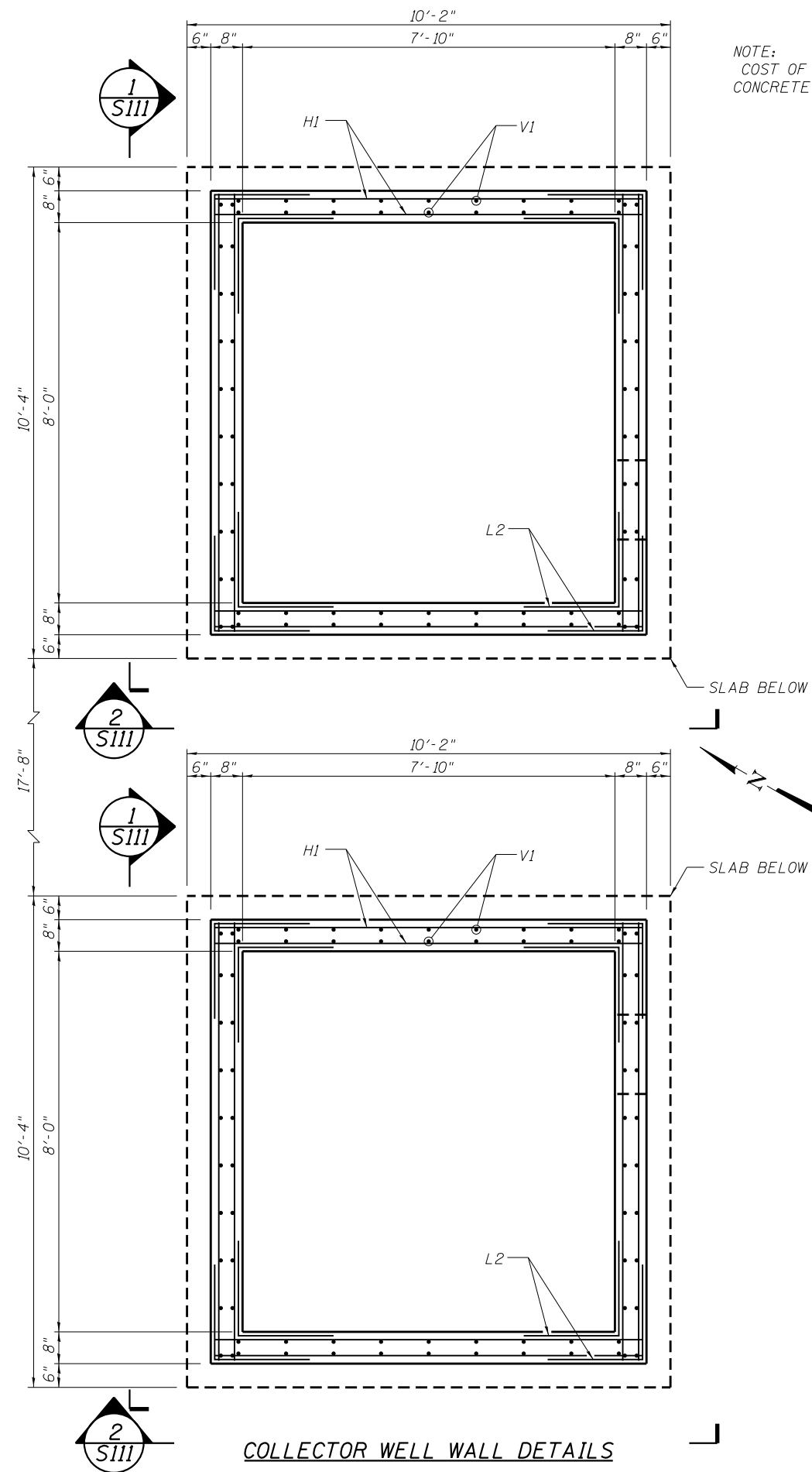
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WELL HOUSE BLDG - COLLECTOR WELL PLAN MISSOURI AVENUE DEEP WELL FACILITY			
SCALE:	SHEET 10	OF 23 SHEETS	STA. TO STA.

F.A.I. RTE. 55/70/64	SECTION 82-4T-1	COUNTY ST. CLAIR	TOTAL SHEETS 185	SHEET NO. 88
CONTRACT NO. 76099				
ILLINOIS FED. AID PROJECT				

S110

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PLOT DATE = 1/14/2015	CHECKED - RJP	REVISED -
	DATE - ADL	REVISED -

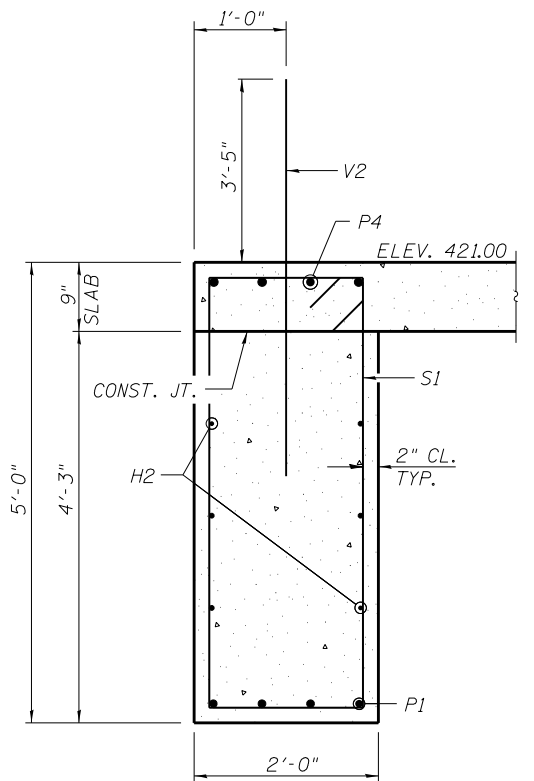
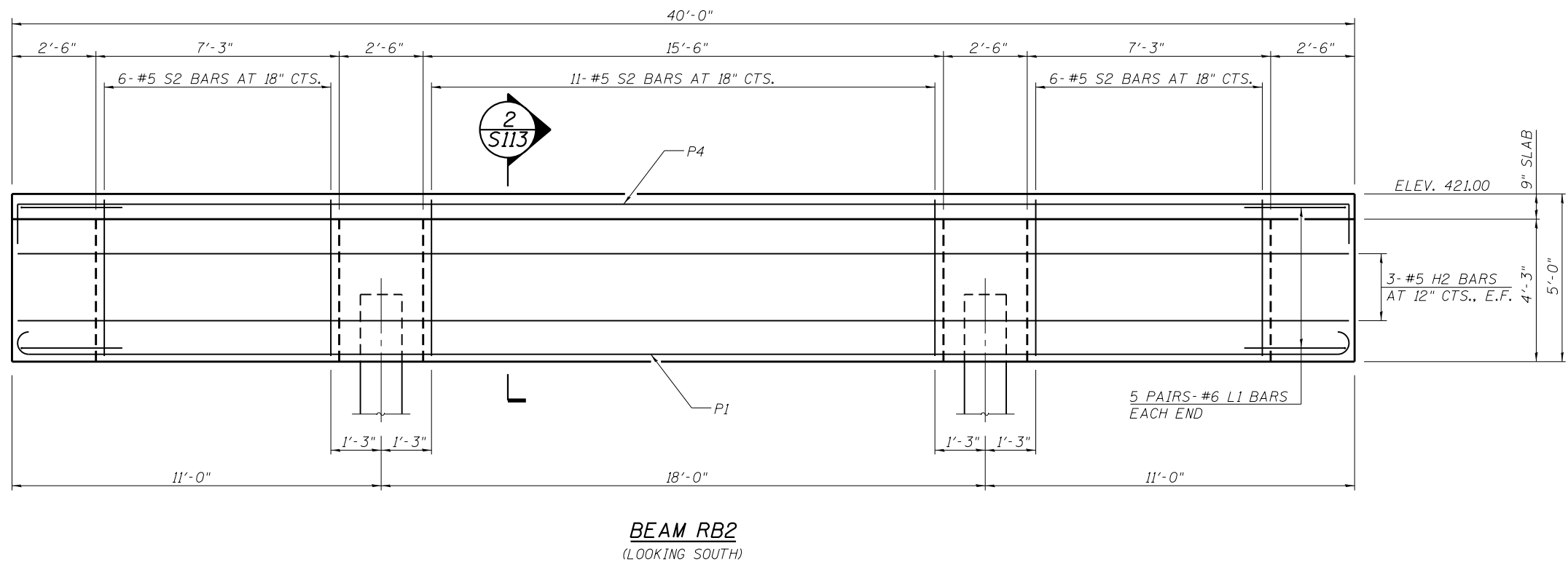
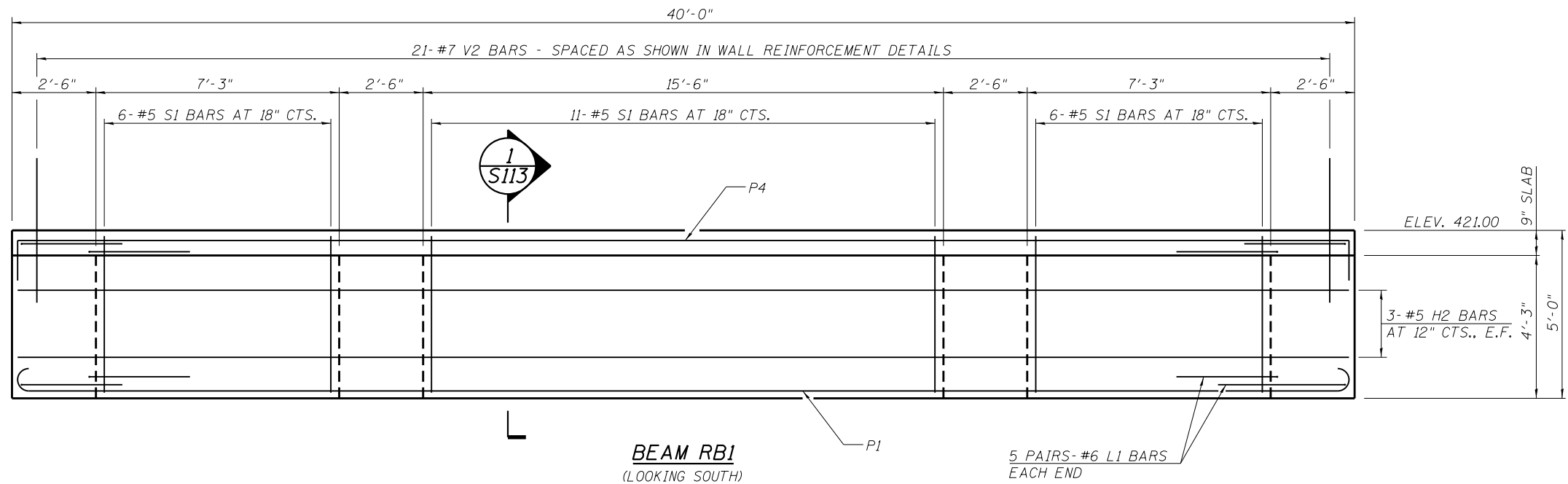
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WELL HOUSE BLDG - COLLECTOR WELL WALL DETAILS
MISSOURI AVENUE DEEP WELL FACILITY

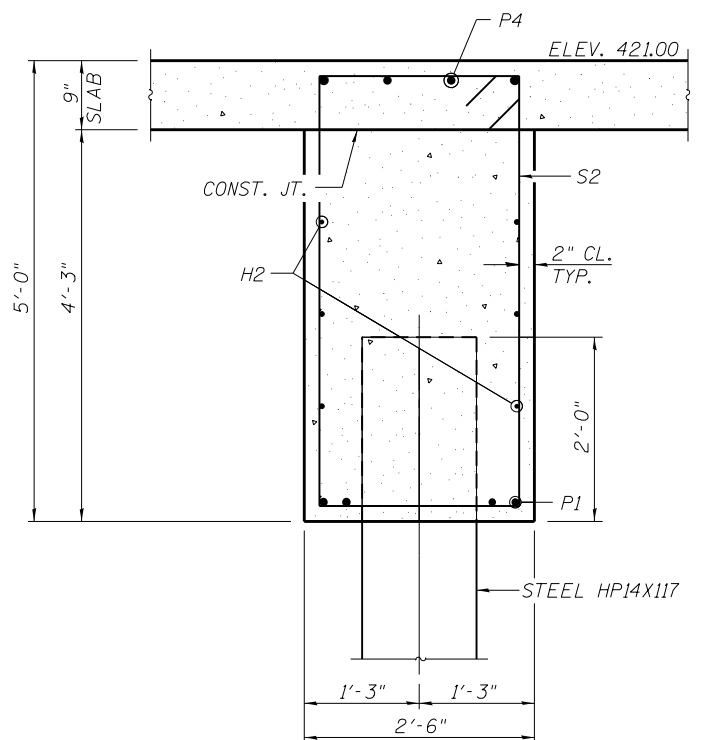
SCALE: SHEET 11 OF 23 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55/70/64	82-4T-1	ST. CLAIR	185	89
CONTRACT NO. 76C99				
ILLINOIS FED. AID PROJECT				

S111



SECTION **1**
S113



SECTION **2**
S113

FILE NAME = G:\11\110023\Work Order 6\CADD Sheets\Grade Beam Plan.dgn

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PLOT DATE = 1/14/2015	CHECKED - RJP	REVISED -
	DATE - ADL	REVISED -

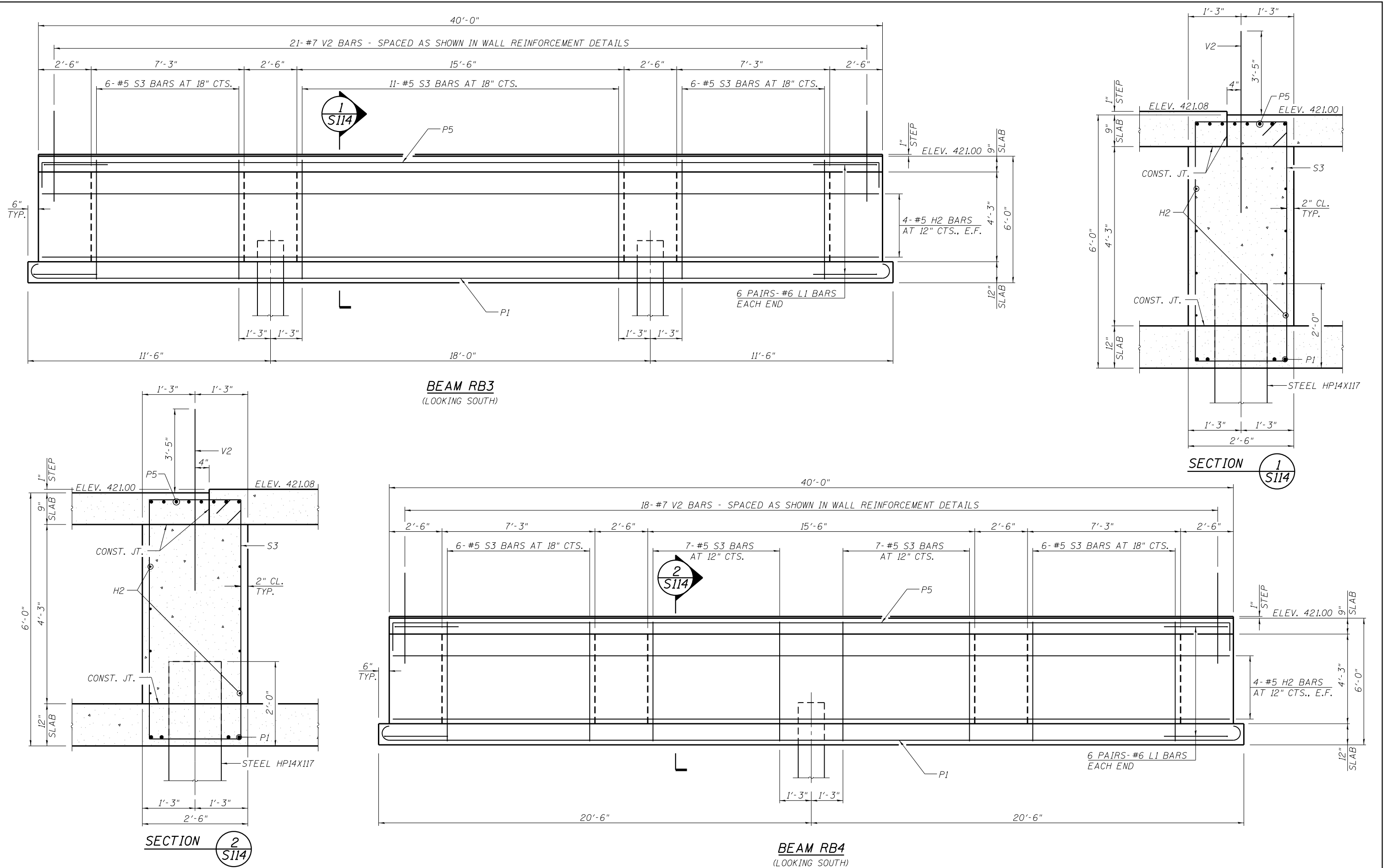
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WELL HOUSE BLDG - CONCRETE BEAM DETAILS
MISSOURI AVENUE DEEP WELL FACILITY

SCALE: SHEET 13 OF 23 SHEETS STA. TO STA.

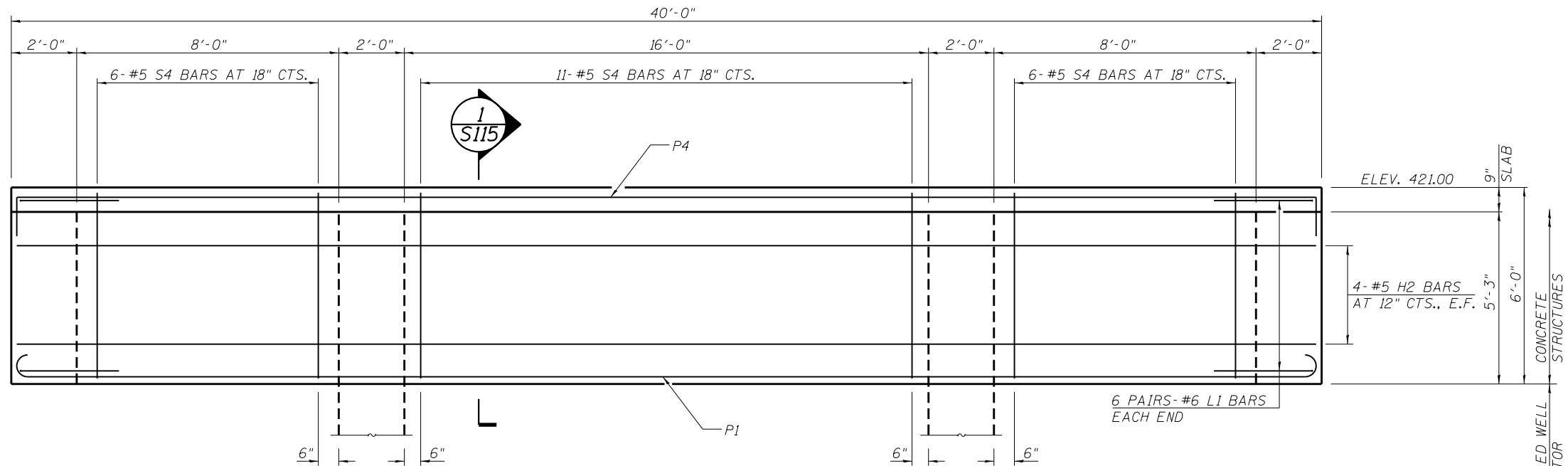
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55/70/64	82-4T-1	ST. CLAIR	185	91
CONTRACT NO. 76099				
ILLINOIS FED. AID PROJECT				

S113

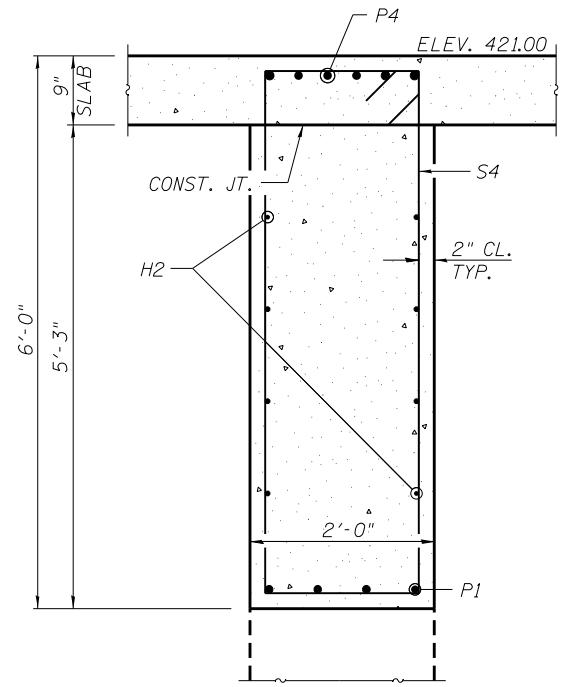


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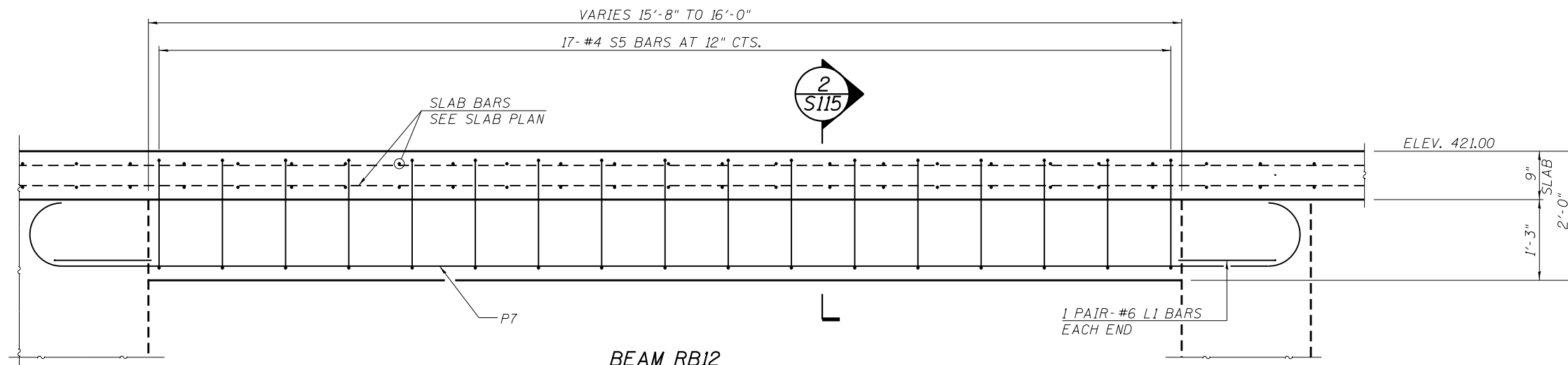
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		PLOT SCALE = 25.0007' / in.	DRAWN - ADL	REVISED -						55/70/64	82-4T-1	ST. CLAIR	185	92
		PLOT DATE = 1/14/2015	CHECKED - RJP	REVISED -				CONTRACT NO. 76G99						
		DATE - ADL	REVISED -											
		SCALE:		SHEET 14		OF 23 SHEETS	STA.	TO STA.		ILLINOIS FED. AID PROJECT				



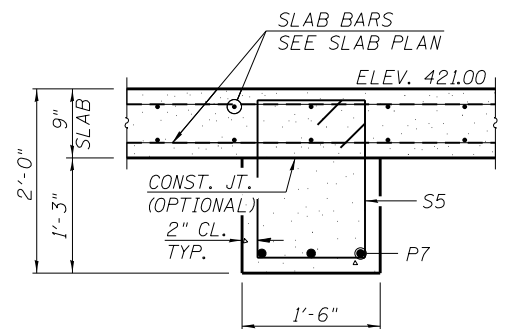
BEAM RB5
(LOOKING SOUTH)



SECTION 1
S115



BEAM RB12
(LOOKING SOUTH)



SECTION 2
S115

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	DATE - ADL	REVISED -

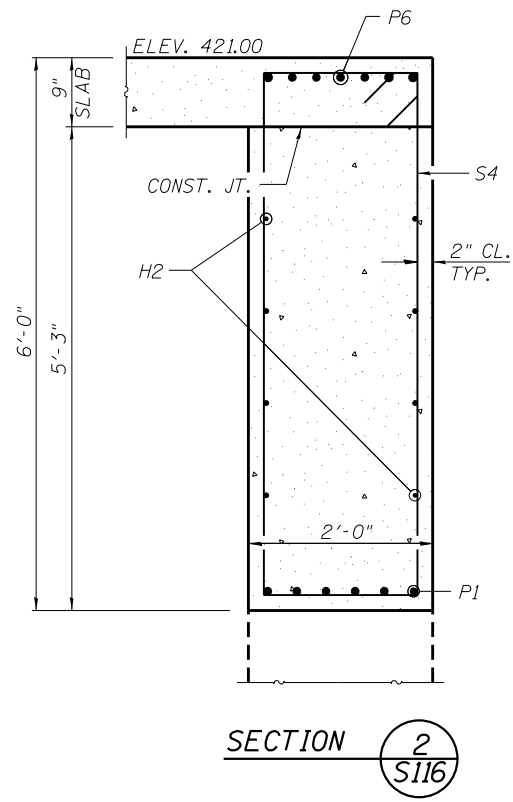
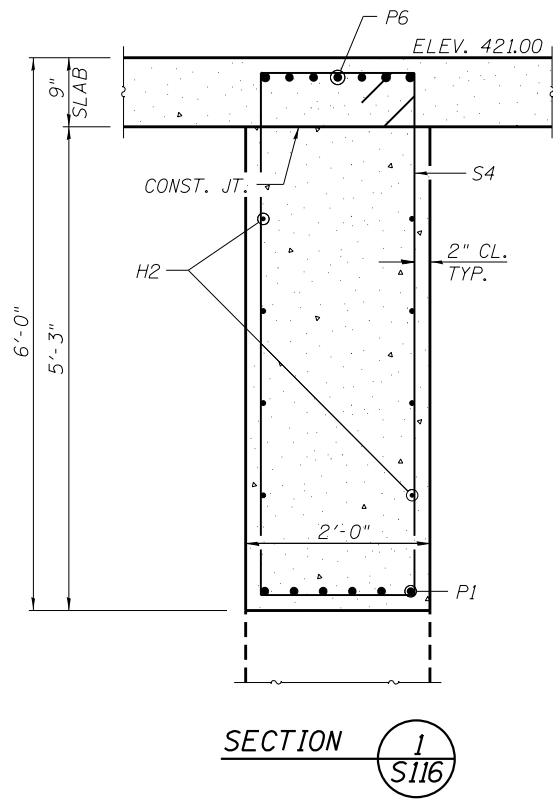
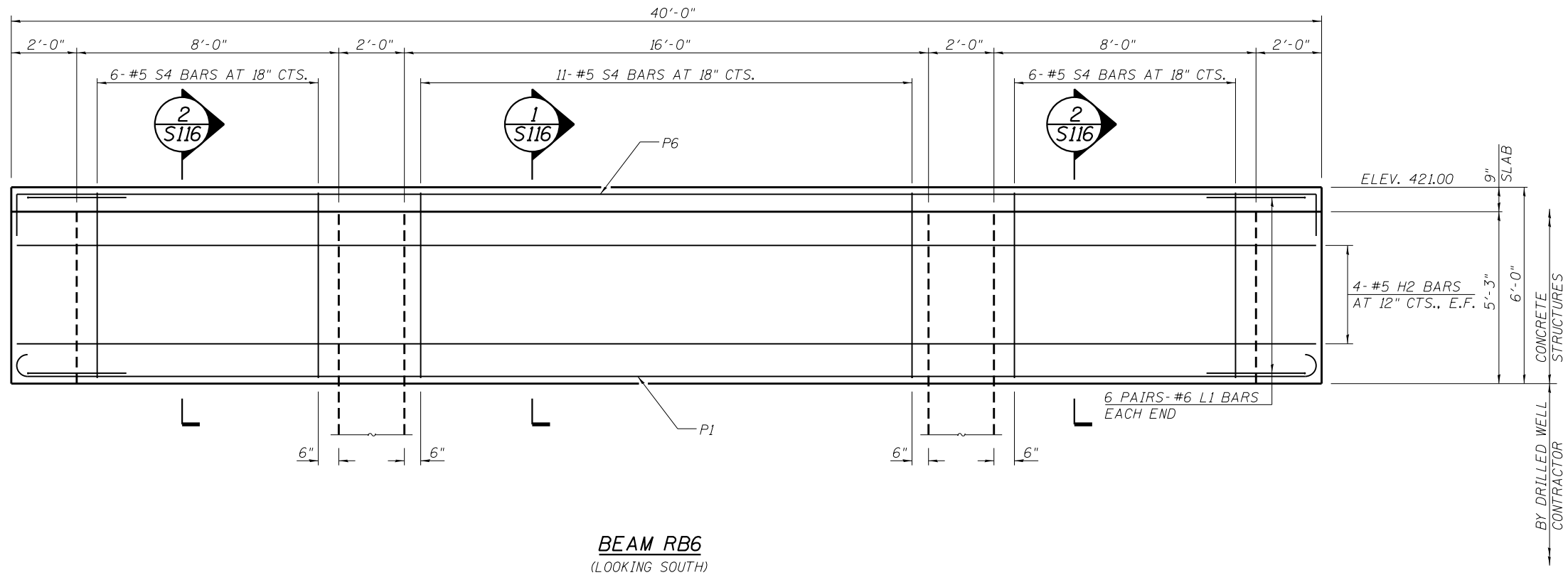
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WELL HOUSE BLDG - CONCRETE BEAM DETAILS
MISSOURI AVENUE DEEP WELL FACILITY

SCALE: SHEET 15 OF 23 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55/70/64	82-4T-1	ST. CLAIR	185	93
CONTRACT NO. 76099				
ILLINOIS FED. AID PROJECT				

S115



FILE NAME = G:\11\Files\110023\Work Order 6\CADD Sheets\Grade Beam Plan.dgn

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PLOT DATE = 1/14/2015

DESIGNED - RJP
DRAWN - ADL
CHECKED - RJP
DATE - ADL

REVISED -
REVISED -
REVISED -
REVISED -

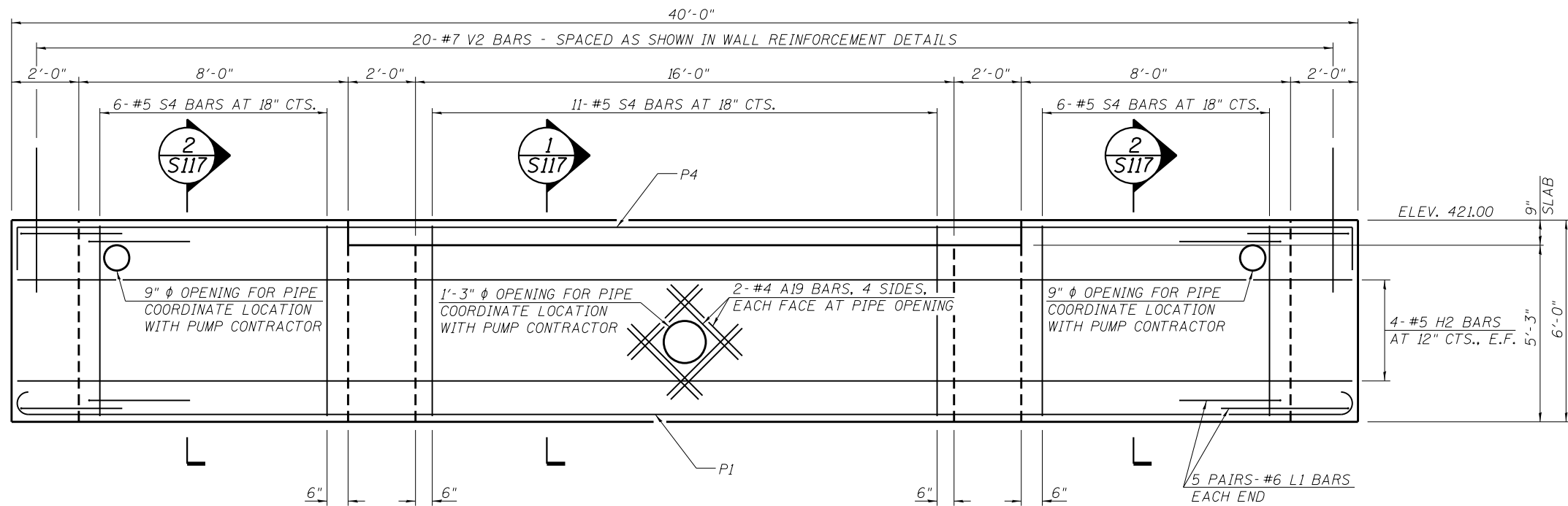
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WELL HOUSE BLDG - CONCRETE BEAM DETAILS
MISSOURI AVENUE DEEP WELL FACILITY

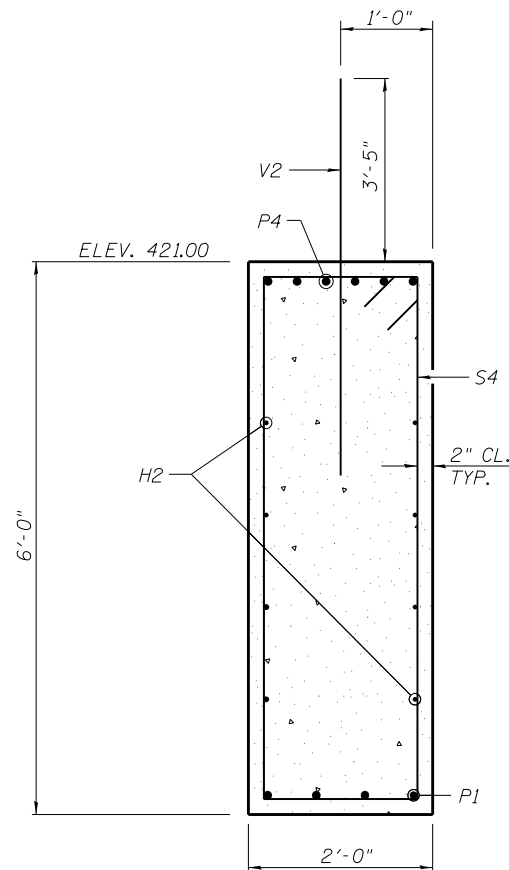
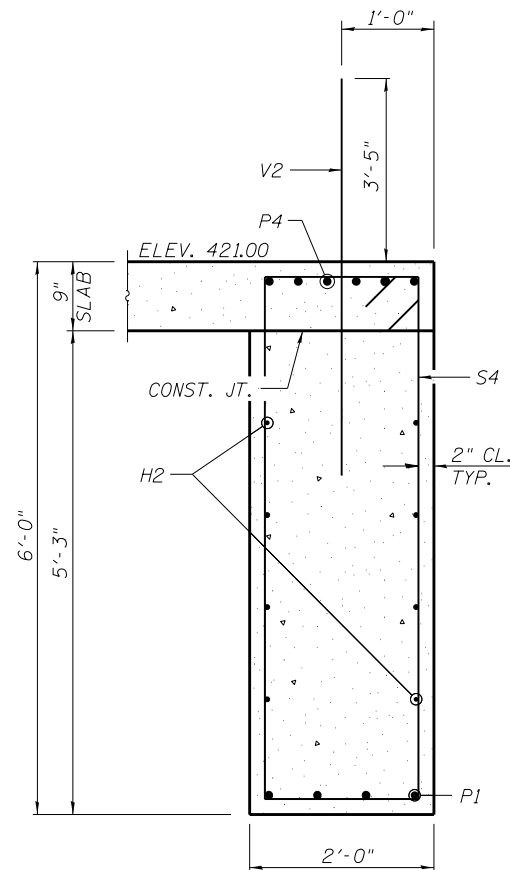
SCALE: SHEET 16 OF 23 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55/70/64	82-4T-1	ST. CLAIR	185	94
CONTRACT NO. 76C99				
ILLINOIS FED. AID PROJECT				

S116



BEAM RB7
(LOOKING SOUTH)



FILE NAME = G:\117\110023\Work Order 6\CADD Sheets\Grade Beam Plan.dgn

KLINGNER
& ASSOCIATES, P.C.
Engineers • Architects • Surveyors

USER NAME = seb
PLOT SCALE = 25.0007' / in.
PLOT DATE = 1/14/2015

DESIGNED - RJP
DRAWN - ADL
CHECKED - RJP
DATE - ADL

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REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WELL HOUSE BLDG - CONCRETE BEAM DETAILS
MISSOURI AVENUE DEEP WELL FACILITY

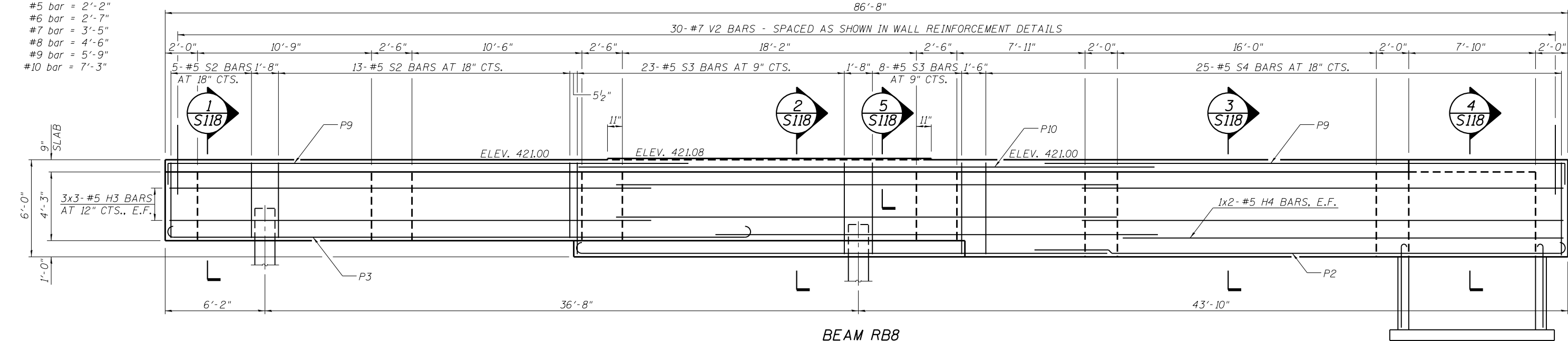
SCALE: SHEET 17 OF 23 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55/70/64	82-4T-1	ST. CLAIR	185	95
CONTRACT NO. 76099				
ILLINOIS FED. AID PROJECT				

S117

MINIMUM BAR LAP

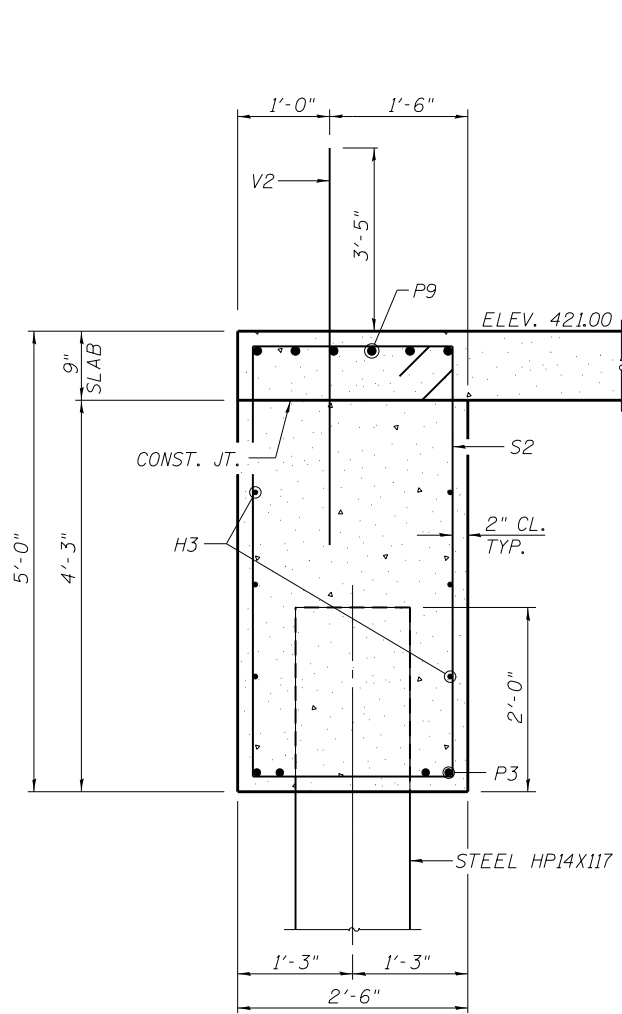
- #5 bar = 2'-2"
- #6 bar = 2'-7"
- #7 bar = 3'-5"
- #8 bar = 4'-6"
- #9 bar = 5'-9"
- #10 bar = 7'-3"



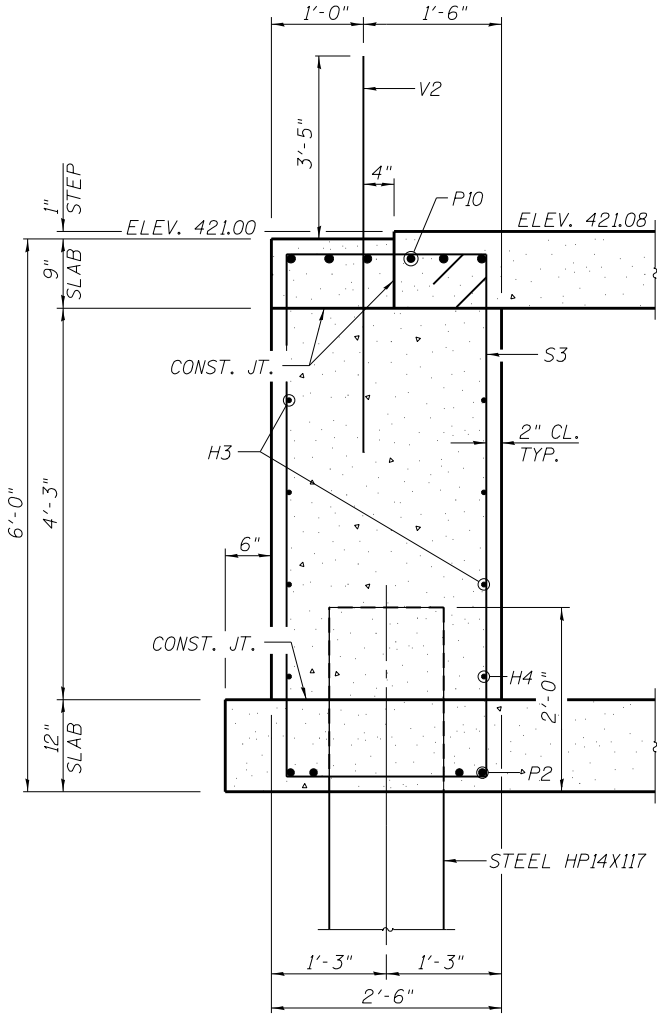
BEAM RB8

(LOOKING EAST)

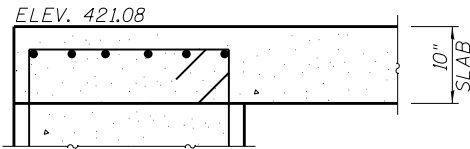
NOTE:
BARS INDICATED THUS 3X3-#5 ETC. INDICATES
3 LINES OF BARS WITH 3 LENGTHS PER LINE.



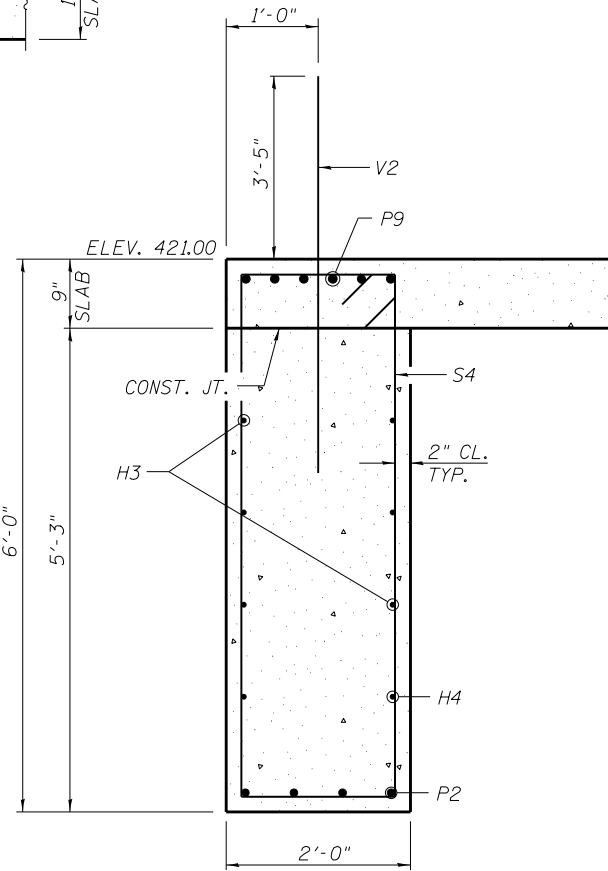
SECTION 1 S118



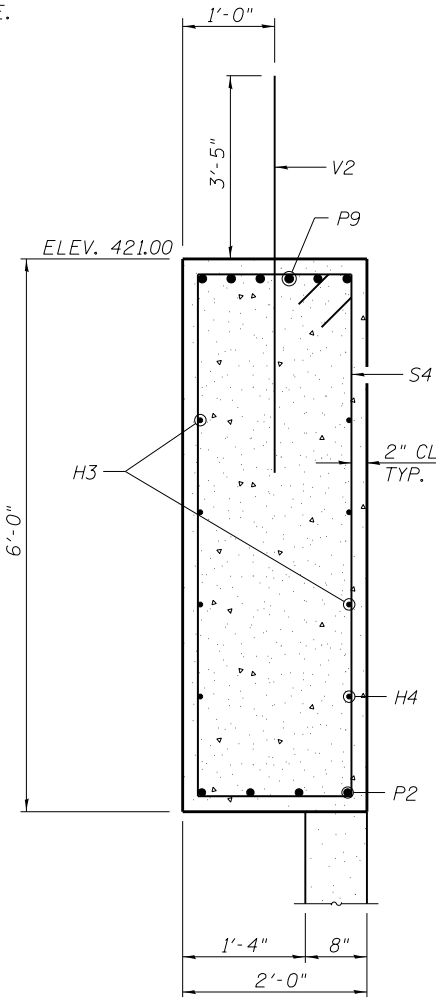
SECTION 2 S118



SECTION 5 S118



SECTION 3 S118



SECTION 4 S118

FILE NAME = G:\11\Files\110023\Work Order 6\CADD Sheets\Grade Beam Plan.dgn

KLINGNER & ASSOCIATES, P.C.
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USER NAME = seb
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WELL HOUSE BLDG - CONCRETE BEAM DETAILS
MISSOURI AVENUE DEEP WELL FACILITY

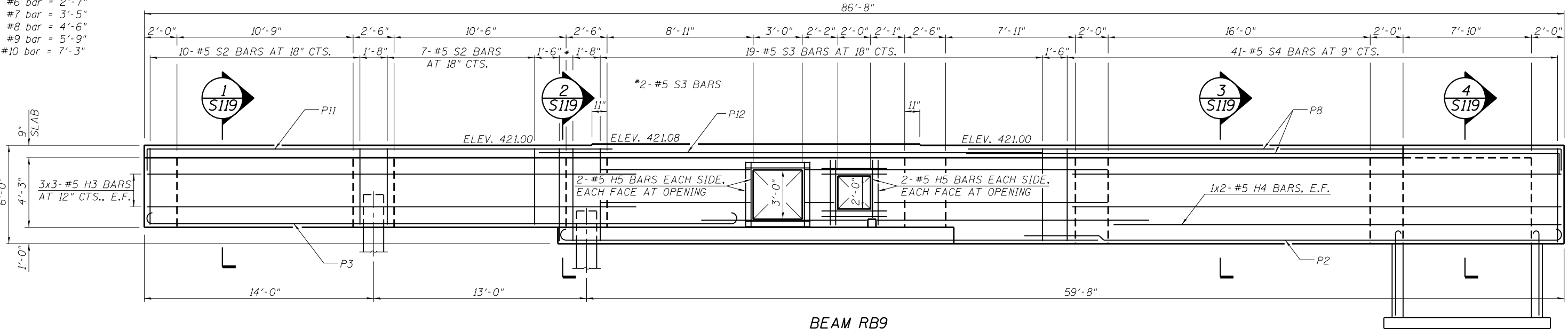
SCALE: SHEET 18 OF 23 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55/70/64	82-4T-1	ST. CLAIR	185	96
CONTRACT NO. 76C99				
ILLINOIS FED. AID PROJECT				

S118

MINIMUM BAR LAP

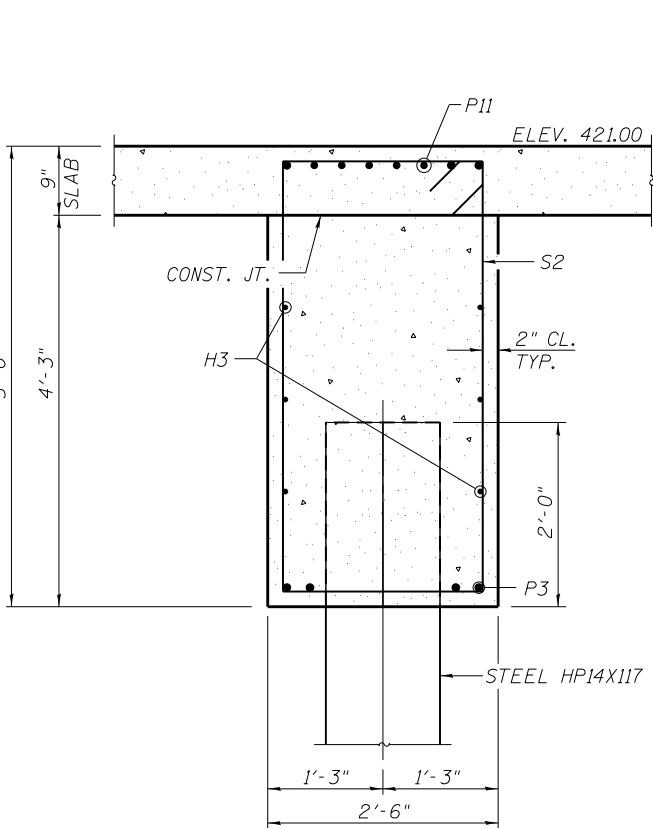
#5 bar = 2'-2"
#6 bar = 2'-7"
#7 bar = 3'-5"
#8 bar = 4'-6"
#9 bar = 5'-9"
#10 bar = 7'-3"



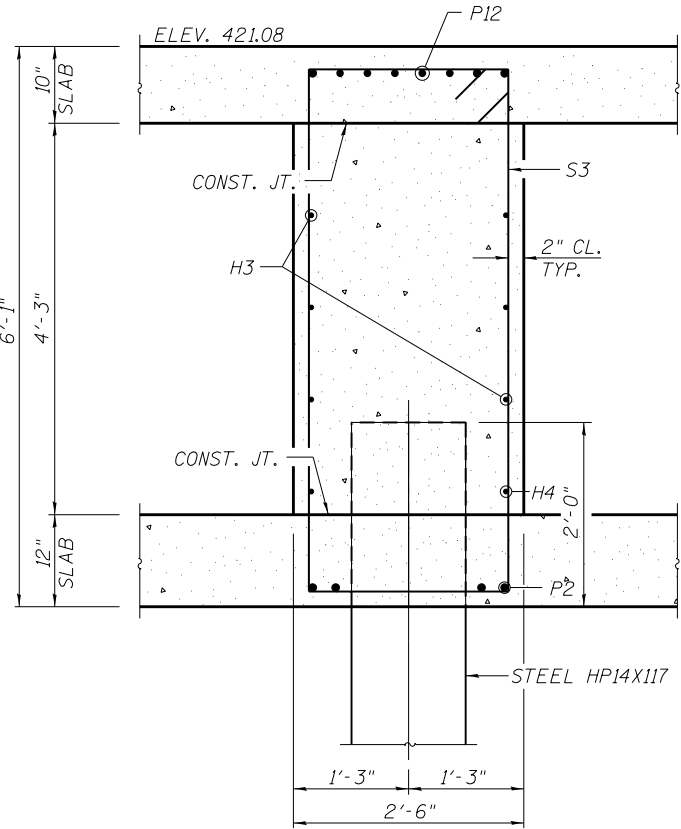
BEAM RB9

(LOOKING EAST)

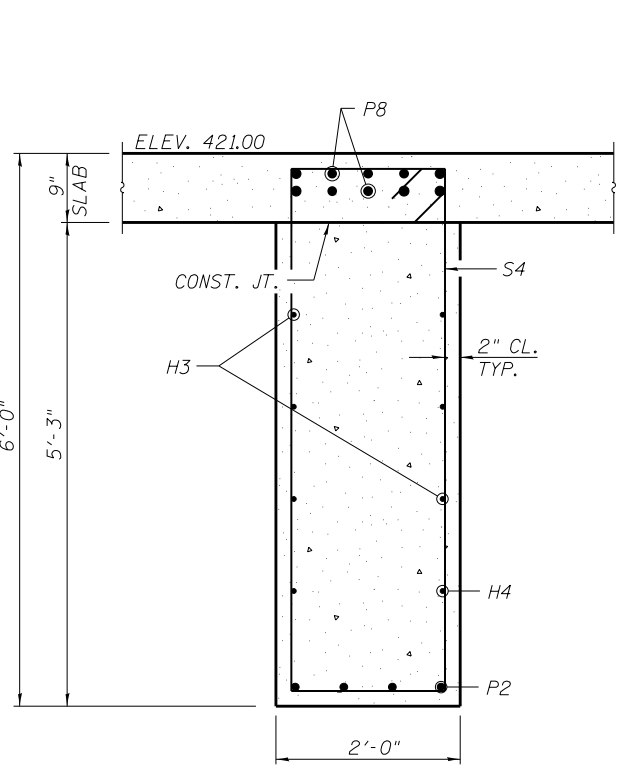
NOTE:
BARS INDICATED THUS 3X3-#5 ETC. INDICATES
3 LINES OF BARS WITH 3 LENGTHS PER LINE.



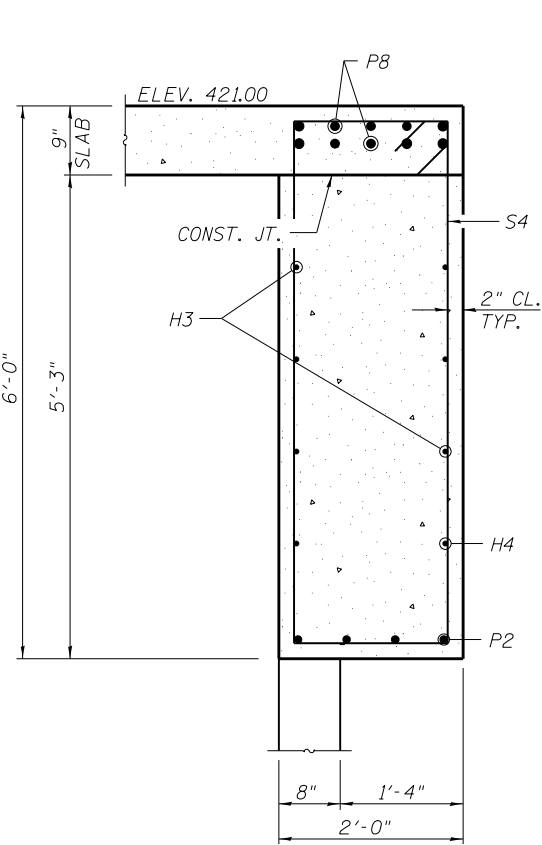
SECTION 1 S119



SECTION 2 S119



SECTION 3 S119



SECTION 4 S119

FILE NAME = G:\11\Files\110023\Work Order 6\CADD Sheets\Grade Beam Plan.dgn

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USER NAME = seb	DESIGNED - RJP	REVISED -
PLOT SCALE = 25.0007' / in.	DRAWN - ADL	REVISED -
PLOT DATE = 1/14/2015	CHECKED - RJP	REVISED -
	DATE - ADL	REVISED -

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WELL HOUSE BLDG - CONCRETE BEAM DETAILS
MISSOURI AVENUE DEEP WELL FACILITY

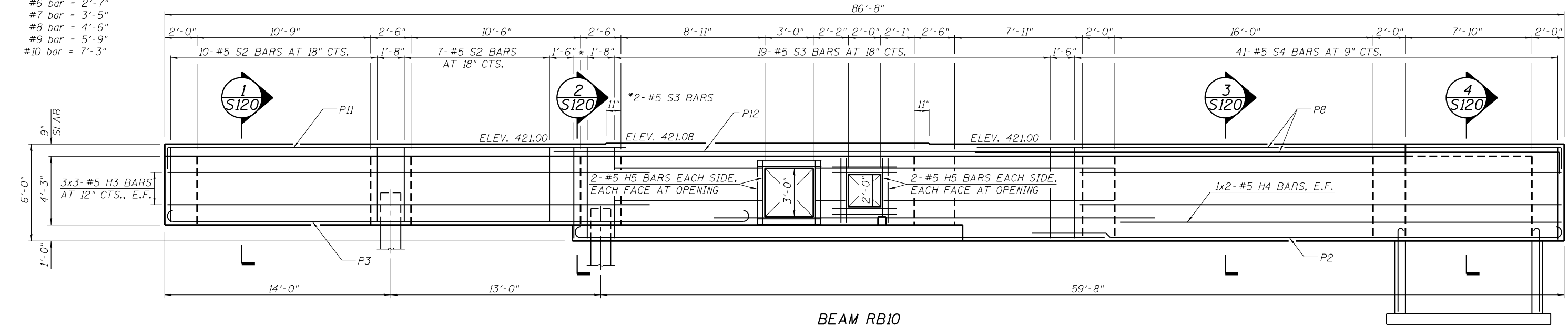
SCALE: SHEET 19 OF 23 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55/70/64	82-4T-1	ST. CLAIR	185	97
CONTRACT NO. 76C99				
ILLINOIS FED. AID PROJECT				

S119

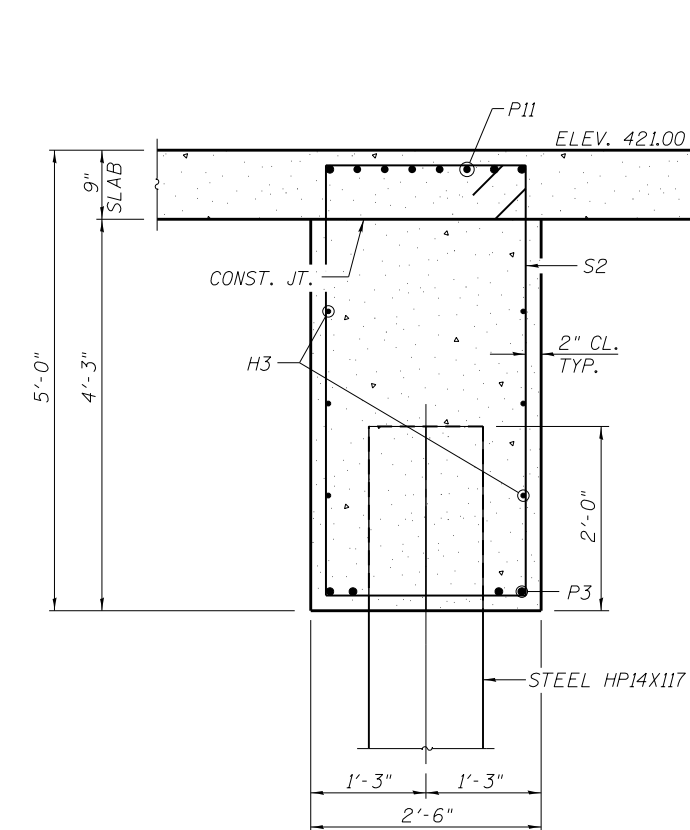
MINIMUM BAR LAP

#5 bar = 2'-2"
#6 bar = 2'-7"
#7 bar = 3'-5"
#8 bar = 4'-6"
#9 bar = 5'-9"
#10 bar = 7'-3"

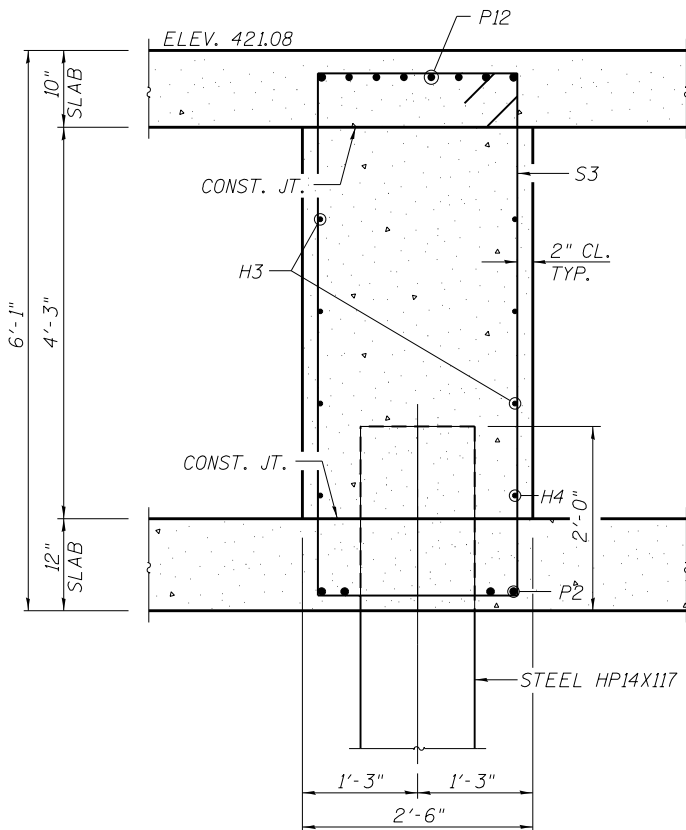


BEAM RB10
(LOOKING EAST)

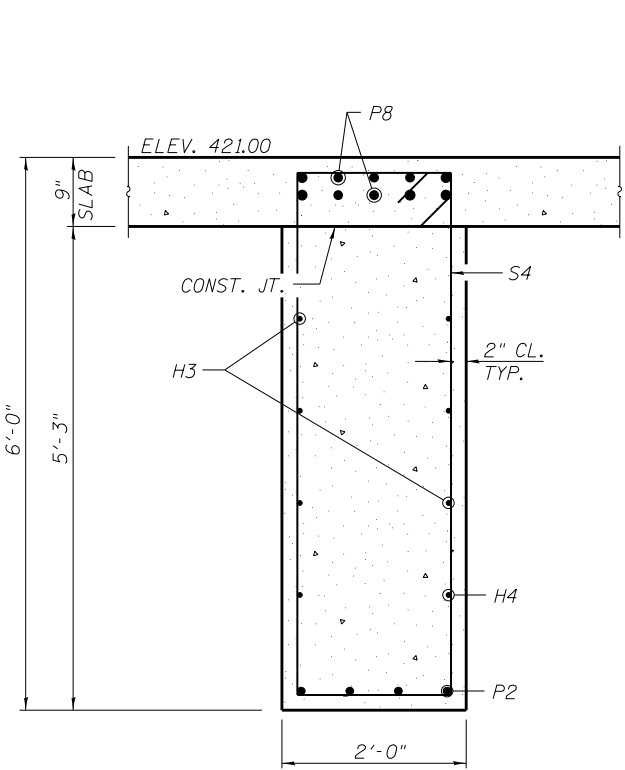
NOTE:
BARS INDICATED THUS 3X3-#5 ETC. INDICATES
3 LINES OF BARS WITH 3 LENGTHS PER LINE.



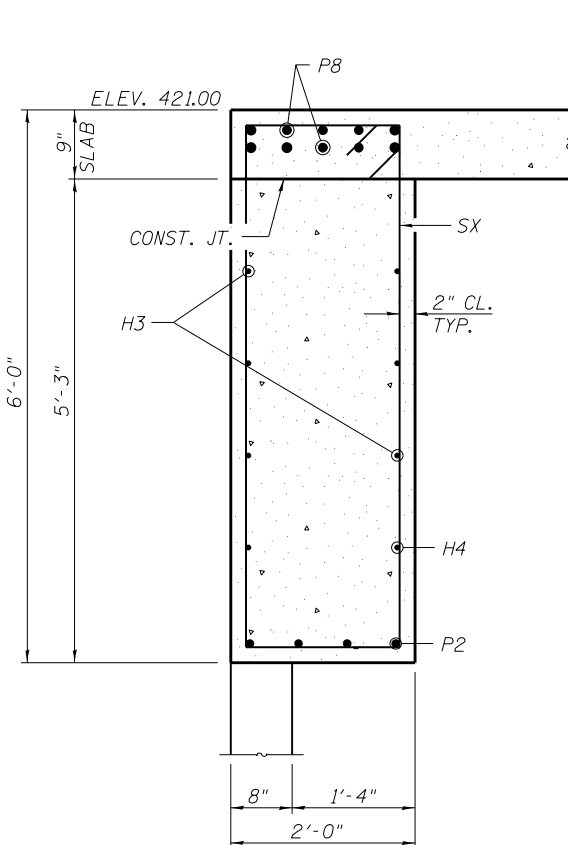
SECTION 1
S120



SECTION 2
S120



SECTION 3
S120



SECTION 4
S120

FILE NAME = G:\11\Files\110023\Work Order 6\CADD Sheets\Grade Beam Plan.dgn

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& ASSOCIATES, P.C.
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USER NAME = seb
PLOT SCALE = 25.0007' / in.
PLOT DATE = 1/14/2015

DESIGNED - RJP
DRAWN - ADL
CHECKED - RJP
DATE - ADL

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WELL HOUSE BLDG - CONCRETE BEAM DETAILS
MISSOURI AVENUE DEEP WELL FACILITY

SCALE: SHEET 20 OF 23 SHEETS STA. TO STA.

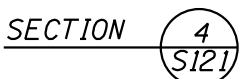
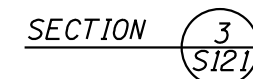
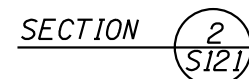
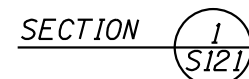
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55/70/64	82-4T-1	ST. CLAIR	185	98
CONTRACT NO. 76C99				
ILLINOIS FED. AID PROJECT				

S120

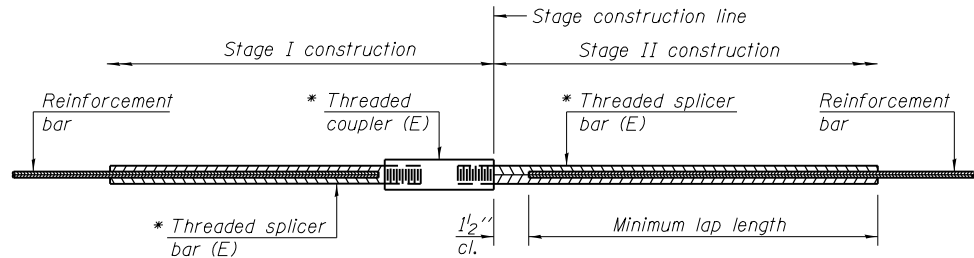
#5 bar = 2'-2"
#6 bar = 2'-7"
#7 bar = 3'-5"
#8 bar = 4'-6"
#9 bar = 5'-9"
#10 bar = 7'-3"



SECTION 5
AT DOOR S121



FILE NAME = G:\11\Files\110023\Work Order 6\CADD Sheets\Grade Beam Plan.dgn



STANDARD BAR SPLICER ASSEMBLY

Minimum Lap Lengths						
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4	Table 5	Table 6
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-7"	2'-11"
5	1'-9"	2'-5"	2'-7"	2'-11"	3'-3"	3'-8"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-10"	4'-5"
7	2'-9"	3'-10"	4'-2"	4'-8"	5'-2"	5'-10"
8	3'-8"	5'-1"	5'-5"	6'-2"	6'-9"	7'-8"
9	4'-7"	6'-5"	6'-10"	7'-9"	8'-7"	9'-8"

Table 1: Black bar, 0.8 Class C

Table 2: Black bar, Top bar lap, 0.8 Class C

Table 3: Epoxy bar, 0.8 Class C

Table 4: Epoxy bar, Top bar lap, 0.8 Class C

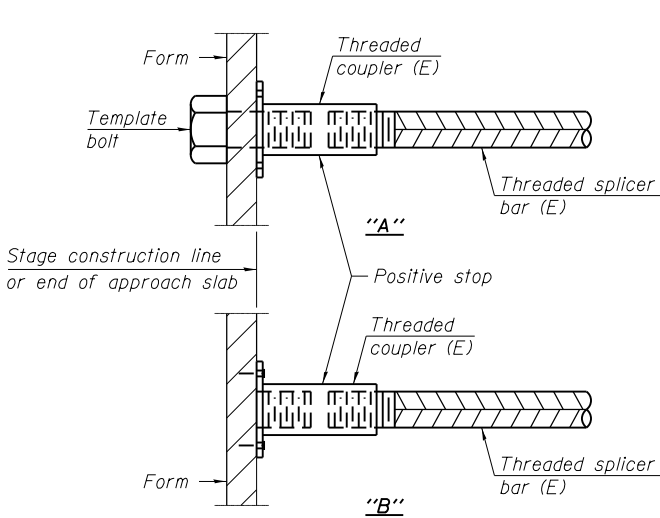
Table 5: Epoxy bar, Class C

Table 6: Epoxy bar, Top bar top, Class C

Threaded splicer bar length = min. lap length + 1/2" + thread length

* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length
Grade Beams	#8	57	Table 1

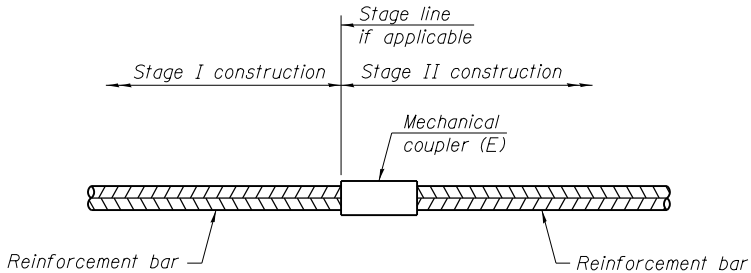


INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.

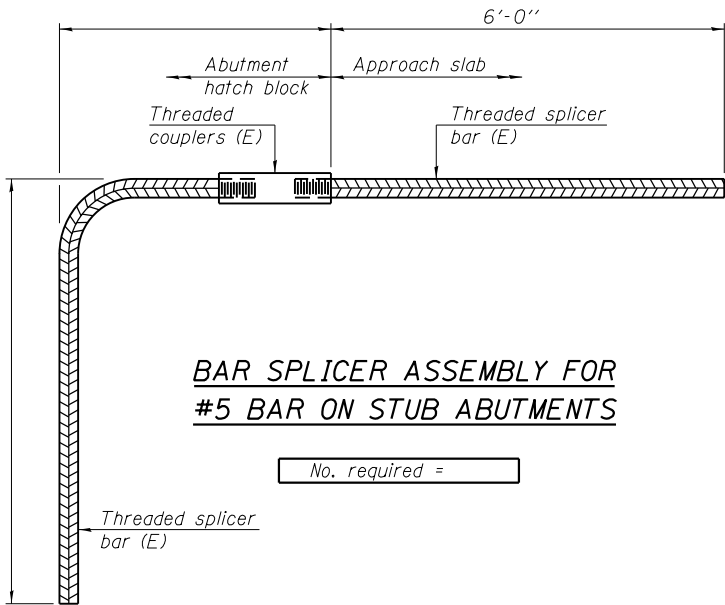
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.

(E) : Indicates epoxy coating.



STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required =

NOTES

Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.

All reinforcement shall be lapped and tied to the splicer bars.

Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.

See approved list of bar splicer assemblies and mechanical splicers for alternatives.

BSD-1

8-31-12

KLINGNER & ASSOCIATES, P.C.
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USER NAME : seb
PLOT SCALE : 25.0007' / in.
PLOT DATE : 1/14/2015

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WELL HOUSE BLDG - BAR SPLICER DETAILS
MISSOURI AVENUE DEEP WELL FACILITY

SCALE: SHEET 22 OF 23 SHEETS STA. TO STA.

F.A.I. RTE. 55/70/64
SECTION 82-4T-1
COUNTY ST. CLAIR
TOTAL SHEETS 185
SHEET NO. 100
CONTRACT NO. 76099
ILLINOIS FED. AID PROJECT

S122