

**TITLE:** Approval of final design and authorization to solicit bids for Cottageville Park, phase 1

**RESOLUTION NUMBER: 14-101**

**MEETING DATE:** December 11, 2014

**PREPARED BY:** Renae Clark

**E-MAIL:** rclark@minnehahacreek.org

**TELEPHONE:** 952-641-4510

**REVIEWED BY:**  Administrator  Counsel  Program Mgr. James Wisker  Board  
 Committee  Engineer  Other

**WORKSHOP ACTION:**

<input type="checkbox"/> Advance to Board mtg. Consent Agenda.	<input type="checkbox"/> Advance to Board meeting for discussion prior to action.
<input type="checkbox"/> Refer to a future workshop (date):_____	<input type="checkbox"/> Refer to taskforce or committee (date):_____
<input type="checkbox"/> Return to staff for additional work.	<input type="checkbox"/> No further action requested.
<input checked="" type="checkbox"/> Other (specify): <u>FINAL ACTION</u> December 11, 2014	

**PURPOSE or ACTION REQUESTED:**

The purpose of the Board action is to approve the final design for Cottageville Park, phase 1 and authorize staff to solicit bids for construction.

**PROJECT/PROGRAM LOCATION:**

Blake Road and Lake St. NE, Hopkins MN

**PROJECT TIMELINE:**

February 13, 2014 Workshop: Draft RBA

- Present project background, schedule and process
- Approve concept design

February 27 Board Meeting:

- Present preliminary budget and funding sources
- Final Action on Draft RBA from workshop

March 13 Board Workshop:

- Public Hearing

March 27 Board Meeting:

- Order Project

April 10 Board Meeting:

- Authorize consultant contract for design services
- Amend Cooperative Agreement between Hopkins and MCWD

May 20 Public informational meeting

May 22 Board Meeting:

- Review of preliminary design

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**DRAFT for discussion purposes only and subject to Board approval and the availability of funds. Resolutions are not final until approved by the Board and signed by the Board Secretary.**

June 12

- Approve final design
- Authorization to solicit bids for construction
- Approve MCWD permit

July 31 Board Meeting:

- Reject bids for construction

October 9, 2014

- Authorization to amend design contracts with Hart Howerton and Wenck Associates and cooperative agreement with Hopkins to include duplex land and alleyway

**December 11, 2014:**

- **Review and approve design modifications and authorization to solicit bids for construction**

**December - January: Advertise request for bids**

**January 2015: Award construction contract**

**Spring 2015: Begin Construction**

**Fall 2015: Complete Construction of phase 1**

**PROJECT/PROGRAM COST:**

Fund name and number: Cottageville Park 3146

**Cost Estimate, Funding and schedule**

<b>Project Area (Design and Construction)</b>	<b>Estimate</b>	<b>Funding</b>	<b>Phasing</b>
Cottageville Park (427/429 Blake Rd, 1303, 1305 Lake St. – work north of creek)	\$1,757,783	*\$483,000 BWSR City of Hopkins Reimbursement	Phase 1 (2015)
Phase 1 cost savings	(\$189,739)		
Cottageville Park (City duplex land and alley)	\$329,308	*City of Hopkins Reimbursement	Phase 1 (2015)
<b>Total phase 1 est.</b>	<b>\$1,897,352</b>		
Gateway (415 Blake Rd)	\$469,000	*City of Hopkins Reimbursement	Phase 2 (2016 - 2018)
Canoe Launch (1308,1312 Lake St)	\$276,000	MCWD	Phase 3 (2016 - 2018)

Expenditures to date: \$240,000 (phase1 design)

\*Pursuant to the First Amendment to the Cooperative Agreement between MCWD and the City of Hopkins, the District will invoice Hopkins monthly and Hopkins will reimburse the District within 30 days for expenditures above the budgeted amount provided by the Clean Water Legacy grant. Note: The Grant Agreement expires December 31, 2016 and the proposed schedule does not impact grant funding.

**PAST BOARD/COUNCIL ACTIONS:**

**July 15, 2010:** Resolution 10-058 Approval of Cooperative Agreement between MCWD and City of Hopkins

**September 9, 2010:** Resolution 10-083 Approval of purchase for 427-429 Blake Road, Hopkins

**December 10, 2010:** Resolution 10-082 Approval of Purchase Agreement for 415 Blake Road and 1303, 1305 Lake Street, Hopkins

**February 27, 2014:** Resolution 14-018 Approval of Concept Design and concurrence of project schedule and process presented by staff

**March 27, 2014:** Resolution 14-023 Ordered Capital Project

**April 10, 2014:** Resolution 14-027 Approval of Cooperative Agreement amendment, approval of BWSR grant agreement, and authorization of design contracts with Wenck Associates and Hart Howerton.

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**June 3, 2014:** City Council Action to approve final project design and solicitation of bids for construction

**June 12, 2014:** Resolution 14-50 Approval of final design; Authorization to solicit bids for construction; and Approval of permit 14-208

**July 31, 2014:** Resolution 14-058 Rejection of Bids for Construction

**December 2, 2014:** City Council Action to approve new final project design and solicitation of bids for construction

#### **SUMMARY:**

The purpose of the Board action is to approve the final design of Cottageville Park Phase 1 and authorize staff to solicit bids for construction. The original phase 1 design was completed in June of this year. Due to a variety of factors including the current bidding climate, high water, clarity of specifications and material choices, the construction bids received in July 2014 were approximately 30% higher than engineer's estimate. The Board of Managers rejected the bids in favor of completing the design for phase 2 and 3, then rebidding a complete package according to the schedule above, with a longer lead time into the construction season. Because it is unclear how the future expansion of Blake Road will affect the District's property at 415 Blake Road, (Gateway parcel, phase 2 of Cottageville Park), the Board concurred with staff's recommendation on October 9, 2014 to proceed with revised project drawings and specifications to only include the original phase 1 area, plus the City land previously occupied by the duplexes, creek buffer improvements at 415 Blake Road, and the alley shown on the concept master plan.

The modified phase 1 design includes:

- engineering modifications to the specifications regarding technical details including pipe seals and soil preparation,
- visual elements include a modification of the planting plan and benches
- final grading and planting plan for a future park shelter
- the alley on the north side of the park
- creek buffer plantings on the south bank (415 Blake Road)

During modification to the phase 1 design the District also participated as a member of the Technical Advisory Committee (TAC), for the Blake Road Corridor Study which is being led by the City of Hopkins and funded by Hennepin Community Works. District staff are actively participating in the TAC and providing comments and direction regarding the interaction between Cottageville Park and the proposed improvements for Blake Road. Participation in the Blake Road planning process has provided information on the maximum ROW extent for Blake Road. Accordingly, phase 1 of the project design responds to the maximum Blake Road expansion option presented.

#### **BACKGROUND:**

Through the Minnehaha Creek Watershed District's Balanced Urban Ecology Policy the District recognizes the integrated relationship of water resources and the built environment and that water resource implementation is strengthened by collaborative efforts. This framework reinforces the District's commitment to integrating its water resource implementation efforts with urban planning, through innovation, partnership and a sustained geographic focus.

The District has focused strategically on a portion of the Creek system most in need, between West 34<sup>th</sup> Street and Meadowbrook Lake, referred to as the Urban Creek Corridor. The sustained focus in this corridor has led to numerous public-private partnerships. The Cottageville Park project is one example in the Urban Creek Corridor of how local government collaboration can meet mutual goals, resulting in overlapping benefits to water quality and the broader community.

In 2010, in response to the City of Hopkins, MCWD purchased 427-429 Blake Road, 415 Blake Road, 1303 and 1305 Lake Street and entered into a cooperative agreement with the City to naturalize and stabilize the creek channel, provide regional stormwater treatment to address the Minnehaha Creek and Lake Hiawatha

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TMDLs, restore the riparian ecosystem, expand and develop the park, and integrate community park amenities with the riparian system for public recreation and education purposes. As part of the agreement, with MCWD approval authority over design elements, Hopkins agreed to fund the design, construction and maintenance of Cottageville Park as well as regional stormwater management facilities to be constructed in part on MCWD land.

Early in 2014 the District was awarded a \$483,000 Clean Water Legacy Fund (CWLF) grant for the stormwater and riparian improvements within Cottageville Park. To most efficiently meet deadlines and conditions of the grant the MCWD-Hopkins cooperative agreement was amended on April 10, 2014. The agreement amendment placed the District in a lead role for design and construction oversight of the project, based on concept plans approved on April 1, and April 10 by the Hopkins City Council and MCWD Board of Managers, respectively. The amendment preserves the City of Hopkins commitment by providing that the City will fund a portion of design costs and the cost of the improvements beyond that which is funded by the CWLF grant. The City will maintain its own park property as well as the stormwater management facilities located on MCWD land. The MCWD will maintain the native vegetation, riparian buffer zone improvements and signage on its land.

Pursuant to the Cooperative Agreement, project plans must be approved by the City of Hopkins and the District. Preliminary plans were presented to Hopkins City Council on May 13, 2014 and the MCWD Board of Managers on May 22. In addition to a Hopkins lead public outreach process in the early stages of design, a community informational meeting was held on May 20, 2014, to obtain input on the final design. On June 3, 2014 the Hopkins City Council approved the final design and the solicitation of bids. Approval by the Board of Managers was provided on June 12, 2014.

Based on available funding, the City and District have pursued a phased Park design and implementation. Phase 1 of the Park design includes: stormwater management, creek buffer restoration, creek access, educational signage, community garden, walking paths, green space and overall landscaping, on the north side of Minnehaha Creek. The stormwater management design includes pretreatment sump manholes and a SAFL baffle leading to underground storage which exits through a sand iron filter. The project will treat 22 acres of runoff and provide 26 lbs. /yr. of phosphorus removal and 2.8 tons/yr. sediment removal. The north creek buffer planting will be composed of mid-height native grasses with groupings of native wildflowers selected for sequential bloom throughout the growing season and shrubs close to the bank. Access will be created with poured colored concrete stepping stones and benches. This treatment will be minimal nearest the creek bank, but provide for a defined path through the buffer area. The overall park design maximizes green space, formalizes existing walking paths, and improves and incorporates the existing community garden.

The City has completed design for the play area on the north side of the Park next to the community garden which is also scheduled to be constructed next year.

**ATTACHMENTS:**

Cottageville Park Phase 1 – 90% Plan, November 2014

## RESOLUTION

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**RESOLUTION NUMBER: 14-101**

**TITLE: Approval of final design and authorization to solicit bids for Cottageville Park, phase 1**

- WHEREAS, the Minnehaha Creek Watershed District (MCWD) has adopted a *Comprehensive Water Resources Management Plan (WRMP)* in accordance with Minnesota Statutes §103B.231;
- WHEREAS, the District's *Water Resources Management Plan* includes a Land Conservation Program;
- WHEREAS, the District's *Water Resources Management Plan* established Minnehaha Creek as a key conservation area with goals of collaborating to create and preserve natural stream corridors, provide buffers, supplement other program activities, increase stormwater runoff abstraction, provide flood control, and promote public education and access;
- WHEREAS, the Board of Managers adopted a policy "In Pursuit of a Balanced Urban Ecology in the Minnehaha Creek Watershed District" to guide the MCWD's planning and watershed management activities, integrating its water resource implementation efforts with urban planning, through innovation, partnership and a sustained geographic focus;
- WHEREAS, the Minnehaha Creek/Lake Hiawatha Total Maximum Daily Load Study identified the area between West 34<sup>th</sup> Street and Meadowbrook Lake as generating the highest pollutant load per unit area when compared to other reaches of Minnehaha Creek;

- WHEREAS, the MCWD established the area between West 34<sup>th</sup> Street and Meadowbrook Lake as a priority area for capital project improvements, aimed at stormwater improvement and streambank restoration;
- WHEREAS, the WRMP provides that the Land Conservation Program will help accomplish these goals by connecting or expanding existing public lands, undertaking a restoration project, or by leveraging redevelopment opportunities, and further provides for capital spending within the Minnehaha Creek corridor (e.g., 5.8.2 and 5.8.5) to restore streambank stability and reduce stormwater volumes and nutrient loading to the creek, including construction of infiltration basins and devices, wetland restoration, reforestation, revegetation, and stormwater detention;
- WHEREAS, in 2010 the District under the Land Conservation Program budget acquired fee title to properties at 415 Blake Road, 1303 and 1305 Lake Street NE, and 427-429 Blake Road ;
- WHEREAS, in 2010 the Board of Managers approved a Cooperative Agreement with the City of Hopkins to coordinate corridor improvements, including the city's design and construction of a stormwater treatment facility on the District's properties; integrated park improvements to those properties and the adjoining Cottageville Park; and further cooperation to expand public benefits within the purposes and powers of each partner, including economic and housing development, public facilities and water resource protection and conservation;
- WHEREAS, pursuant to the Cooperative Agreement the City of Hopkins completed a feasibility study, conceptual design and a public input process for the design of the project;
- WHEREAS, in January 2014 the District was awarded a \$483,000 Clean Water Legacy grant from the Board of Water and Soil Resources for final design and implementation of the stormwater management improvements, Creek corridor vegetative buffer restoration, and public education throughout the park;
- WHEREAS, to meet deadlines and conditions of the grant and to most efficiently implement the water quality and stream corridor restoration components of the project for which the grant funding applies, the City of Hopkins and MCWD approved the First Amendment to the Cooperative Agreement under which the District is responsible for design and construction of the Cottageville Park Project, including certain grading, surfacing and landscaping work on the City's Cottageville Park property, with City reimbursement of MCWD costs exceeding the grant amount and an allocation responsibility to maintain the improvements and lands;
- WHEREAS, the Conceptual Master Plan was approved by Hopkins City Council and the MCWD Board of Managers on April 1, 2014 and April 10, 2014 respectively;
- WHEREAS, in accordance with Minnesota Statutes § 103B.251, subdivision 3, the District held a duly noticed public hearing on ordering of the Project on March 13, 2014, at which time all interested parties had the opportunity to speak for and against the Project;
- WHEREAS, pursuant to Minnesota Statutes § 103B.251 and the WRMP, on March 27, 2014, the Board of Managers ordered the Cottageville Park Project;
- WHEREAS, the Hopkins City Council reviewed and commented on draft project plans and schedule on May 13, 2014;
- WHEREAS, Staff held a public informational meeting at Eisenhower Community Center on May 20, 2014 to present project plans and schedule;

- WHEREAS, the Board of Managers reviewed draft project plans and schedule on May 22, 2014;
- WHEREAS, the Hopkins City Council approved project plans and schedule on June 3, 2014;
- WHEREAS, the board of Mangers authorized the District Administrator, on advice of Counsel, to execute project design contracts with Hart Howerton for the not to exceed amount of \$85,000 and to Wenck Associates for the not to exceed amount of \$95,000;
- WHEREAS, the Minnehaha Creek Watershed District Board of Managers approved the final design for Phase 1 of the Cottageville Park Project, MCWD Permit 14-208, and authorized the District Administrator to solicit bids for construction on June 12, 2014;
- WHEREAS, when bids were opened in July 2014 bid prices were substantially higher than the engineer's estimate due to several factors including the bidding climate, a high water table, material design choices, and clarity of the specifications;
- WHEREAS, based on staff evaluation and its consultation with the District engineer and the City of Hopkins, which would bear the additional project cost, the Board of Managers adopted Resolution 14-058 rejecting the bids, in favor of staff's examination of the costs of Park features and offering value-based adjustments to design elements, completing design of phases 2 and 3 based on adjustments to phase 1 and reissuing the request for bids;
- WHEREAS, the City of Hopkins is leading the Blake Road Corridor Study to evaluate the future expansion of Blake Road to accomplish several goals including connections to parks and trails and enhancements to natural resources within the corridor;
- WHEREAS, the District is a member of the Blake Road Corridor Study Technical Advisory Committee, actively participating in the project study as a regulatory entity, a landowner within the corridor, and a partner with the City of Hopkins, Hennepin County and others;
- WHEREAS, the Board of Managers supports staff's collaborative role in Blake Road corridor planning, but also directed staff in its participation to communicate the Board's interest in preserving the District's investment in real property along the corridor and the District's ability to achieve the water resource goals pursuant to which its real estate interests were acquired;
- WHEREAS, the Board of Managers Directed that design for Cottageville Park phases 2 and 3 be delayed until the future impacts to 415 Blake Road as a result of the planned Blake Road expansion are known;
- WHEREAS, the Board of Managers approved a Second Amendment to the Cooperative Agreement between the MCWD and the City of Hopkins to incorporate additional City land into Cottageville Park, Phase 1;
- WHEREAS, the Board of Managers directed staff to proceed with design in accordance with the Board's direction in Resolution 14-058 for phase 1, incorporating design for grading and vegetation of the duplex area and the Park entry road (existing alley), consistent with the Park Master Plan;
- WHEREAS, the Board of Managers authorized project design contract amendments with Hart Howerton for the additional amount of \$31,500 and with Wenck Associates for the additional amount of \$23,855, and with an additional contingency of \$4,645 for allocation between the two contracts as the Administrator may find warranted.

WHEREAS, Hopkins City Council approved the amended final design for phase 1 on December 2, 2014;

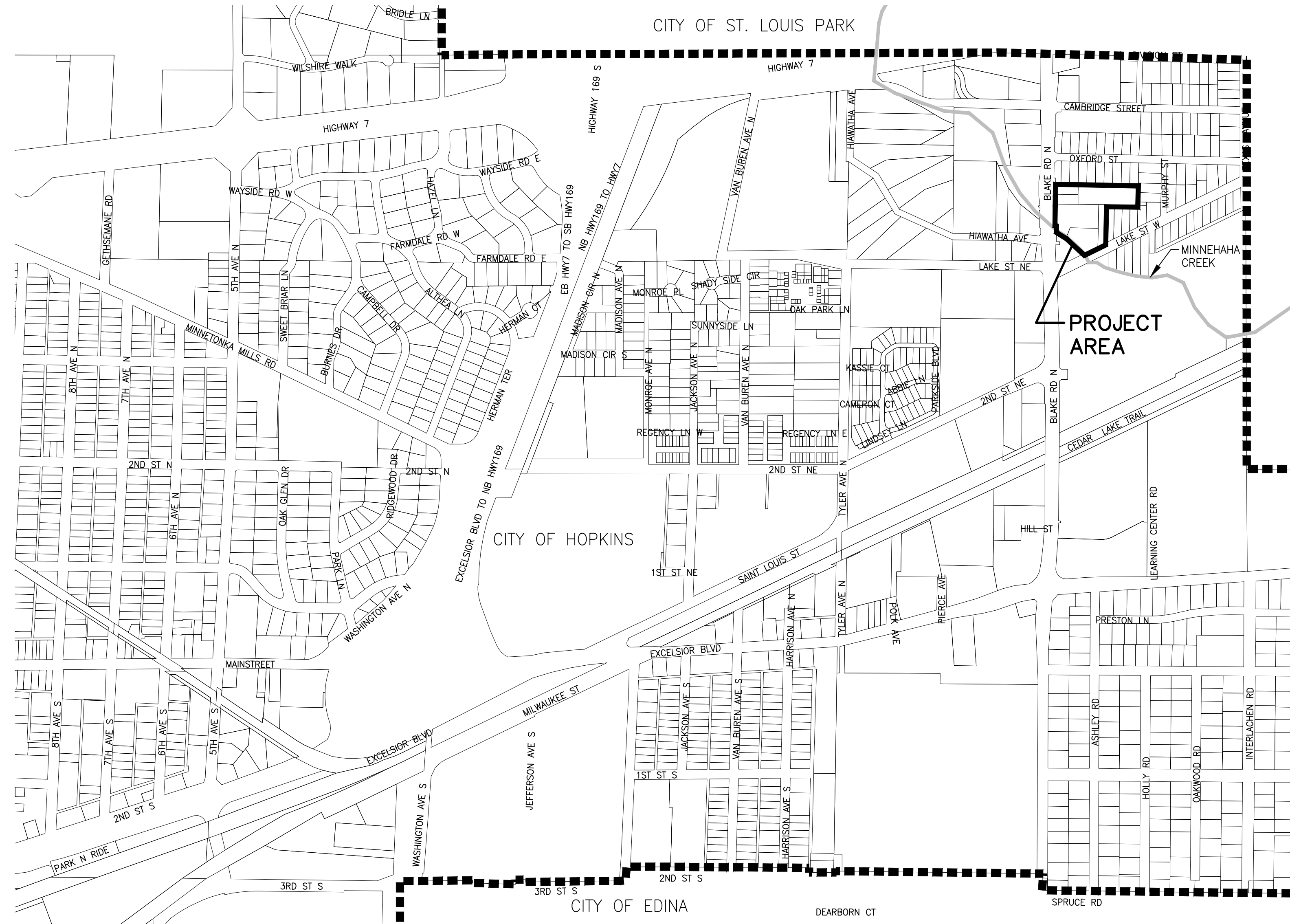
NOW THEREFORE BE IT RESOLVED, the Minnehaha Creek Watershed District Board of Managers hereby approves the amended final design for phase 1 of the Cottageville Park Project and authorizes the District Administrator to solicit public bids for construction.

Resolution Number 14-101 was moved by Manager \_\_\_\_\_, seconded by Manager \_\_\_\_\_  
Motion to adopt the resolution \_\_\_\_ ayes, \_\_\_\_ nays, \_\_\_\_ abstentions. Date: December 11, 2014.

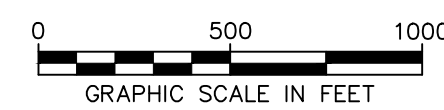
\_\_\_\_\_  
Secretary Date: \_\_\_\_\_



# MINNEHAHA CREEK WATERSHED DISTRICT CITY OF HOPKINS COTTAGEVILLE PARK PHASE 1-90% PLAN NOVEMBER 2014



PROJECT VICINITY MAP



SHEET INDEX	
SHEET	TITLE
G1.0	TITLE AND INDEX SHEET
G1.1	ESTIMATED QUANTITIES
G1.2	GENERAL NOTES
E1.0	EXISTING CONDITIONS
E1.1	REMOVAL PLAN
E1.2	TREE PRESERVATION PLAN
E1.3	TREE PRESERVATION LIST
E2.0	EROSION CONTROL PLAN
E2.1	SOILS
E4.0	TILT PLAN
E5.0	STORM SEWER PLAN
E5.1	STORM SEWER PROFILES
E5.2	STORM SEWER PROFILES
E0.0	LANDING PLAN
E0.0	LANDING DETAILS
E0.1	LANDING DETAILS
E0.2	LANDING DETAILS
E0.3	LANDING DETAILS
E0.4	LANDING DETAILS
L1.0	SITE LAYOUT PLAN
L2.0	SITE GRADING PLAN
L2.1	TOP SOIL LOCATION PLAN
L3.0	IRRIGATION POINT PLAN
L4.0	SITE PLANTING PLAN
L4.1	DETAILED PLANTING PLAN
L4.2	PLANTING LIST AND PLANTING DETAILS
L4.3	PLANTING DETAILS
L5.0	LANDSCAPE CONSTRUCTION DETAILS
L5.1	LANDSCAPE CONSTRUCTION DETAILS
L5.2	LANDSCAPE CONSTRUCTION DETAILS
L5.3	LANDSCAPE CONSTRUCTION DETAILS
L5.4	LANDSCAPE CONSTRUCTION DETAILS
L5.5	LANDSCAPE CONSTRUCTION DETAILS
E1.0	ELECTRICAL SITE PLAN
E2.0	ELECTRICAL DETAILS
THIS PLAN CONTAINS 31 SHEETS	

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and I am a duly licensed Engineer under the laws of the State of Minnesota.

REGISTERED PROFESSIONAL ENGINEER - MECHANICAL  
Date: 11/11/14  
License No: 43000014

## COTTAGEVILLE PARK PHASE 1

Hopkins, Minnesota  
Minnehaha Creek Watershed District

SCALE: AS SHOWN  
NOTE: THIS DRAWING IS 25% OF THE FULL SCALE DRAWING. USE FIELD DIMENSIONS FOR FIELD WORK. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE NOTED. ARCHITECT FOR MEASUREMENTS THAT ARE NOT INDICATED.

DATE	ISSUE
XX/XX/14	BID ISSUE

REVISIONS		
NO.	DATE	ISSUE

DRAWING TITLE:  
**TITLE AND INDEX SHEET**

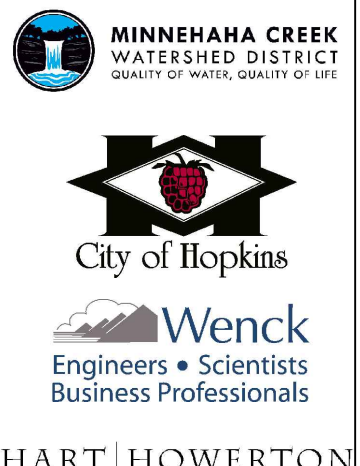
PROJECT #: 0185-5097  
DRAWN BY: MJS  
CHECKED BY: CJM

DRAWING NO:  
**G1.0**

Item No.	Base Bid Item Description	Units	Quantity
1	MOBILIZATION & DEMOBILIZATION	LS	1
2	TRAFFIC CONTROL	LS	1
3	TREE PROTECTION	LS	1
4	CLEARING AND GRUBBING	LS	1
5	ORANGE MESH CONSTRUCTION FENCING	LF	1000
6	REMOVE STORM SEWER PIPE	LF	483
7	REMOVE FLARED-END SECTION	EA	1
8	REMOVE STRUCTURE	EA	7
9	REMOVE CONCRETE CURB & GUTTER	LF	266
10	REMOVE CONCRETE WALK	SF	2248
11	REMOVE CONCRETE PAVEMENT	SF	3361
12	REMOVE BITUMINOUS PAVEMENT	SY	405
13	REMOVE BITUMINOUS DRIVEWAY PAVEMENT	SY	427
14	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)	LF	579
15	REMOVE RETAINING WALL	LF	23
16	REMOVE FENCE	LF	164
17	REMOVE PLAYGROUND	LS	1
18	REMOVE TRASH RECEPTACLE	EA	1
19	REMOVE BENCH	EA	2
20	REMOVE SIGN	EA	2
21	REMOVE LIGHT POLE	EA	3
22	REMOVE POWER POLE	EA	2
23	REMOVE EXISTING IRRIGATION SYSTEM	LS	1
24	REMOVE EXISTING IRRIGATION BOX	LS	1
25	SALVAGE AND REINSTALL FENCE	LF	24
26	SALVAGE AND REINSTALL SIGN	EA	1
27	ABANDON STORM SEWER PIPE	LF	90
28	ABANDON SANITARY SERVICE	EA	1
29	ABANDON WATER SERVICE	EA	1
30	POTHOLE FORCEMAIN	LS	1
31	POTHOLE GAS MAIN	LS	1
32	COMMON EXCAVATION - ONSITE (EV)	CY	2150
33	COMMON EXCAVATION - OFFSITE (EV)	CY	250
34	COMMON BORROW (CV)	CY	100
35	GRANULAR BORROW	TON	350
36	BITUMINOUS MATERIAL FOR TACK COAT	GAL	88
37	TYPE SP 9.5 WEARING COURSE MIXTURE (3,B)	TON	185
38	TYPE SP 12.5 NON-WEARING COURSE MIXTURE (3,B)	TON	272
39	AGGREGATE BASE CLASS 5, 100% CRUSHED	TON	1781
40	PAVEMENT MARKINGS	LS	1
41	CONNECT TO EXISTING SANITARY SEWER PIPE	EA	2
42	6" PVC SANITARY SEWER PIPE SDR-26	LF	130
43	6" PVC PLUG	EA	1
44	CONNECT TO EXISTING WATERMAIN	EA	1
45	1" TYPE K COPPER WATER SERVICE	LF	280
46	6" WATER SERVICE DUCTILE IRON PIPE CL 52	LF	200
47	6" GATE VALVE & BOX	EA	3
48	DUCTILE IRON FITTINGS	LB	1000
49	INSTALL HYDRANT & VALVE	EA	1
50	IRRIGATION BOX W/ BACKFLOW PREVENTER	LS	1

Item No.	Base Bid Item Description	Units	Quantity
51	BOOSTER PUMP	LS	1
52	HOSE BIBB	LS	1
53	DRINKING FOUNTAIN W/ FOOTWASH	LS	1
54	CONNECT TO EXISTING STORM SEWER PIPE	EA	2
55	6" PVC SCHEDULE 40 DRAIN PIPE	LF	594
56	8" PVC SDR 26 SOLID WALL PIPE	LF	36
57	8" PVC SDR 26 PERFORATED PIPE	LF	87
58	12" RC PIPE SEWER CLASS III	LF	159
59	15" RC PIPE SEWER CLASS III	LF	90
60	18" RC PIPE SEWER CLASS III	LF	673
61	30" RCP PIPE SEWER CLASS III	LF	14
62	48" RC PIPE SEWER CLASS III	LF	57
63	44"x27" RC ARCH PIPE SEWER CLASS III	LF	135
64	6" PVC WYE	EA	5
65	AREA DRAIN - FLAT GRATE	EA	9
66	AREA DRAIN - DOMED GRATE	EA	5
67	2'X3' CATCH BASIN	EA	2
68	27" DIAMETER CATCH BASIN	EA	1
69	4' DIAMETER STORM SEWER MANHOLE	EA	1
70	4' DIAMETER STORM SEWER CATCH BASIN MANHOLE	EA	5
71	6' DIAMETER STORM SEWER CATCH BASIN MANHOLE W/ WEIR WALL	EA	1
72	7' DIAMETER OUTLET STRUCTURE W/ WEIR WALL	EA	1
73	7' DIAMETER STORM SEWER MANHOLE	EA	2
74	7' DIAMETER STORM SEWER CATCH BASIN MANHOLE	EA	1
75	7' DIAMETER CLEANOUT MANHOLE W/ SAFL BAFFLE	EA	2
76	6'X6' OUTFALL STRUCTURE W/ HEADWALL, STONE VENEER, AND RAILING	LS	1
77	UNDERGROUND STORAGE UNIT	LS	1
78	SAND FILTER SYSTEM	LS	1
79	2" POLYSTYRENE INSULATION SHEETS	SY	18
80	ADJUST EXISTING VALVE BOX	EA	1
81	ADJUST EXISTING CASTING	EA	1
82	PEDESTRIAN RAMP	EA	2
83	4" CONCRETE WALK	SF	2090
84	COLOR CONCRETE WALK, 5"	SF	8658
85	6" CONCRETE DRIVEWAY	SF	418
86	8" CONCRETE PAVEMENT	SF	2405
87	8" REINFORCED COLORED CONCRETE PAVEMENT	SF	3590
88	COLOR CONCRETE WALK, MOCK-UP	EA	1
89	CONCRETE CURB & GUTTER DESIGN B618	LF	590
90	COLOR CONCRETE BAND	LF	200
91	CONCRETE UNIT PAVERS	SF	1012
92	PAVER EDGING	LF	426
93	COLOR CONCRETE AND WOOD BENCH	EA	7
94	CONCRETE STAIRS AND RAILINGS	LS	1
95	CRUSHED ROCK SURFACING	SF	1780
96	TREATED TIMBER BEAMS	LS	1
97	TREATED TIMBER WALK	SF	160
98	WOOD PLANTER WALL	LF	210
99	STREET SWEEPER (WITH PICKUP BROOM)	HR	15
100	WATER FOR DUST CONTROL	MG	10

Item No.	Base Bid Item Description	Units	Quantity
101	DEWATERING	DAY	60
102	SILT FENCE, TYPE MS - MAINTAINED	LF	550
103	FLOTATION SILT CURTAIN TYPE MOVING WATER	LF	75
104	SEDIMENT CONTROL LOG TYPE STRAW (OR BIOROLL)	LF	260
105	INLET PROTECTION - MAINTAINED	EA	15
106	INLET PROTECTION (AREA DRAIN) - MAINTAINED	EA	14
107	TEMPORARY ROCK CONSTRUCTION ENTRANCE	EA	2
108	STRAW MULCH TYPE 1 W/ DISC ANCHORING	SY	100
109	HAND PLACED RIP RAP TYPE A	TON	18
110	HAND PLACED RIP RAP TYPE B	TON	6
111	HAND PLACED RIP RAP TYPE C	TON	10
112	TYPE V GEOTEXTILE	SY	45
113	TYPE 2 COMPOST (LV)	CY	236
114	PREMIUM TOPSOIL BORROW (LV)	CY	1097
115	SODDING TYPE MINERAL	SY	4157
116	TEMPORARY SEEDING	AC	1
117	CONIFEROUS TREE 8 FT. HT. B&B	EA	13
118	DECIDUOUS TREE 3" CAL. B&B	EA	26
119	DECIDUOUS TREE 2" CAL. B&B	EA	25
120	ORNAMENTAL TREE 2" CAL. B&B	EA	19
121	DECIDUOUS TREE #10 CONT. B&B	EA	9
122	ORNAMENTAL TREE; MULTI 8 FT. HT. B&B	EA	11
123	CONIFEROUS SHRUB #2 CONT.	EA	390
124	DECIDUOUS SHRUB #5 CONT.	EA	1449
125	DECIDUOUS SHRUB #2 CONT.	EA	177
126	VINE #1 CONT.	EA	16
127	PERENNIAL #1 CONT.	EA	1264
128	PERENNIAL 4" POT	EA	276
129	ORNAMENTAL GRASS #1 CONT.	EA	775
130	LANDSCAPE EDGER	LF	1266
131	WOOD MULCH, TYPE 6	CY	445
132	IRRIGATION SYSTEM A	LS	1
133	PARK BENCH - 6 FT	EA	2
134	PARK BENCH - 8 FT	EA	2
135	TRASH RECEPTACLE	EA	4
136	WELDED WIRE FENCE	LF	288
137	6 FT. FENCE GATE	EA	2
138	PARK SIGN	EA	2
139	CEDAR COMPOST BIN	EA	1
140	ELECTRICAL SERVICE	LS	1
141	WALKWAY LIGHTS	EA	15
142	LIGHTING CIRCUITS	LS	1
143	LIGHTING SERVICE PANEL	LS	1



HART HOWERTON

I hereby certify that this plan, specification, or estimate was prepared by me or under my direct supervision and I am a duly licensed Engineer under the laws of the State of Minnesota.  
 License No: 431111 Date: 01/14/14

**COTTAGEVILLE PARK  
 PHASE 1**  
 Hopkins, Minnesota  
 Minnehaha Creek Watershed District

SCALE: AS SHOWN  
 NOTE: DIMENSIONS IN 24" X 36" DRAWINGS  
 SCALE DRAWINGS USE FIGURED DIMENSIONS  
 UNLESS OTHERWISE SPECIFIED. DIMENSIONS  
 ARE TO FACE UNLESS OTHERWISE SPECIFIED.  
 ARCHITECT FOR MEASUREMENTS THAT ARE  
 NOT INDICATED.

DATE	ISSUE
XX/XX/14	BID ISSUE

REVISIONS		
NO.	DATE	ISSUE

DRAWING TITLE:  
**ESTIMATED  
 QUANTITIES**

PROJECT #: 0185-5097  
 DRAWN BY: MJS  
 CHECKED BY: CJM

DRAWING NO:  
**G1.1**

GENERAL NOTES:

1. ALL QUANTITIES ARE APPROXIMATE AND MAY VARY TO ALLOW COMPLETION OF WORK.
2. THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D. THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-2 ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA".
3. CONTRACTOR SHOULD ANTICIPATE PRIVATE UTILITY CONFLICTS THROUGHOUT THE PROJECT SUB CUT AND TRENCH AREAS AND SHALL COORDINATE WITH PRIVATE UTILITY OWNERS.
4. REVIEW ALL TREE REMOVALS WITH ENGINEER AND OWNER.
5. SALVAGE AND REINSTALL STREET AND TRAFFIC SIGNS, AS DIRECTED BY FIELD ENGINEER.
6. INSTALL AND MAINTAIN EROSION CONTROL DEVICES AS SPECIFIED OR AS DIRECTED BY ENGINEER.
7. CONTRACTOR SHALL COMPLY WITH ALL STATE, COUNTY, AND CITY PERMITS.
8. MAINTAIN MAIL SERVICE TO PROPERTIES.
9. PROTECT EXISTING PAVEMENT, EXCEPT AS NOTED.
10. CONTRACTOR TO COORDINATE AND MAINTAIN ACCESS TO ADJACENT PROPERTIES AND ALLEYWAY. MULTIPLE MOBILIZATIONS MAY BE REQUIRED TO COMPLETE THE WORK. NO CONSTRUCTION PARKING IN ALLEYWAY.
11. CONTRACTOR RESPONSIBLE TO COORDINATE ALL WORK WITH SUBCONTRACTORS INCLUDING LOCATION OF INSTALLED UTILITIES, ELECTRICAL CONDUIT AND WIRING, ETC.

EROSION CONTROL NOTES:

1. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED DEPENDING ON SITE CONDITIONS DURING CONSTRUCTION. COORDINATE WITH ENGINEER.
2. CONCRETE WASH-OUT SHALL COMPLETED OFF-SITE OR CONCRETE READY MIX TRUCKS SHALL BE SELF-CONTAINED.
3. SEE LANDSCAPE DRAWINGS FOR FINAL STABILIZATION PLAN.
4. SEE SHEET C2.1 FOR TEMPORARY STABILIZATION REQUIREMENTS.

REMOVAL NOTES:

1. FEATURES NOT SPECIFICALLY IDENTIFIED ON PLAN FOR SALVAGE OR REMOVAL THAT CONFLICT WITH CONSTRUCTION ARE TO BE REVIEWED WITH ENGINEER.

DEWATERING NOTES:

1. CONTRACTOR SHOULD ANTICIPATE GROUND WATER. A BID ITEM HAS BEEN PROVIDED FOR DEWATERING AS ALL DEWATERING WORK NECESSARY FOR CONSTRUCTION.
2. CONTRACTOR RESPONSIBLE TO SUBMIT DEWATERING PLAN TO ENGINEER FOR REVIEW. DEWATERING SHALL MEET ALL PERMIT REQUIREMENTS AND BE APPROVED PRIOR TO STARTING ANY CONSTRUCTION ACTIVITIES.

SANITARY SERVICE NOTES:

1. SANITARY SERVICE SHALL BE 6" PVC SDR-26.
2. SANITARY SERVICE SHALL SLOPE AT MINIMUM 1/4" PER FOOT.
3. PIPE BEDDING FOR SANITARY SERVICE SHALL CONFORM TO ASTM D-2321 AND CITY OF HOPKINS STANDARD DETAIL SS-5 (INCIDENTAL). SEE SHEET C8.1.
4. SANITARY SERVICE CONNECTION SHALL CONFORM TO CITY OF HOPKINS STANDARD DETAIL SS-2. SEE SHEET C8.1.
5. PROVIDE PLUG AT SANITARY SERVICE STUB FOR FUTURE PHASE CONNECTION.
6. PROVIDE METAL FENCE POST AT END OF SANITARY SERVICE STUB, 4' ABOVE GRADE. SANITARY FENCE POST SHALL BE PAINTED GREEN.

WATER SERVICE NOTES:

1. WATER SERVICE SHALL BE 6" DIP CL 52 UNLESS NOTED OTHERWISE.
2. PIPE BEDDING FOR WATER SERVICE SHALL CONFORM TO CITY OF HOPKINS STANDARD DETAIL SS-5 (INCIDENTAL). SEE SHEET C8.1.
3. WATER SERVICE TO MAINTAIN A MINIMUM COVER OF 7.5', UNLESS OTHERWISE NOTED, OVER-DEPTH INCIDENTAL.
4. HYDRANT ELEVATIONS ARE GIVEN TO TOP NUT.
5. ALL HYDRANTS, VALVES, AND FITTINGS SHALL BE EQUIPPED WITH STAINLESS STEEL BOLTS. HYDRANT AND GATE VALVE SHALL CONFORM TO CITY OF HOPKINS CITY PLATE NUMBERS W-2, W-3, W-4, AND W-6. SEE SHEET C8.3
6. MEGALUG LOCATIONS SHALL CONFORM TO CITY PLATE NUMBER W-3. SEE SHEET C8.3.
7. MAINTAIN 24" SEPARATION BETWEEN ALL UTILITY CROSSINGS.
8. PROVIDE METAL FENCE POST AT END OF WATER SERVICE STUBS, 4' ABOVE GRADE. WATER FENCE POST SHALL BE PAINTED BLUE.
9. PROVIDE CONCRETE THRUST BLOCKING FOR WATER SERVICE PIPING PER DETAIL 5/C8.3 (INCIDENTAL).
10. COPPER COUPLINGS FOR 1" TYPE K WATER SERVICE SHALL BE THREE PART FLARE COUPLING.

STORM SEWER NOTES:

1. STORM SEWER PIPE SHALL BE AS INDICATED ON SHEET C5.0.
2. PIPE BEDDING FOR PVC PIPES SHALL CONFORM TO ASTM D-2321 AND CITY OF HOPKINS STANDARD DETAIL SS-5 (INCIDENTAL). SEE SHEET C8.1.
3. PIPE BEDDING FOR RC PIPE SHALL CONFORM TO CITY OF HOPKINS STANDARD DETAIL ST-6. SEE SHEET C8.1.
4. CONTRACTOR RESPONSIBLE FOR COORDINATING EXACT STORM SEWER STRUCTURE LOCATIONS TO ENSURE TOP-BACK OF CURB ALIGNS WITH TOP-BACK OF CASTING (WHERE APPLICABLE).

WARNING:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR CALLING FOR LOCATIONS OF ALL EXISTING UTILITIES. THEY SHALL COOPERATE WITH ALL UTILITY COMPANIES IN MAINTAINING THEIR SERVICE AND/OR RELOCATION OF LINES.

THE CONTRACTOR SHALL CONTACT GOPHER STATE ONE CALL AT 651-454-0002 AT LEAST 48 HOURS IN ADVANCE FOR THE LOCATIONS OF ALL UNDERGROUND WIRES, CABLES, CONDUITS, PIPES, MANHOLES, VALVES OR OTHER BURIED STRUCTURES BEFORE DIGGING. THE CONTRACTOR SHALL REPAIR OR REPLACE THE ABOVE WHEN DAMAGED DURING CONSTRUCTION AT NO COST TO THE OWNER.

CALL BEFORE YOU DIG  
**GOPHER STATE ONE CALL**  
 TWIN CITY AREA: 651-454-0002  
 TOLL FREE 1-800-252-1166

GOVERNING SPECIFICATIONS:

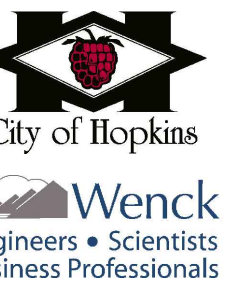
1. THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" 2014 EDITION & LATEST SUPPLEMENTS.
2. CITY ENGINEERS ASSOCIATION OF MINNESOTA (CEAM) STANDARD UTILITIES SPECIFICATIONS (LATEST EDITION)
3. ALL APPLICABLE FEDERAL, STATE AND LOCAL LAWS AND ORDINANCE WILL BE COMPLETED WITH IN THE CONSTRUCTION OF THIS PROJECT.

TRAFFIC CONTROL NOTES:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL CONSTRUCTION STAGING, ON OR OFFSITE, AS NECESSARY TO COMPLETE THE WORK AS SPECIFIED IN THE PROJECT DOCUMENTS. A STAGING PLAN SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO ANY CONSTRUCTION RELATED ACTIVITIES.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRAFFIC CONTROL. ALL TRAFFIC CONTROL SHALL CONFORM TO THE LATEST EDITION OF THE MMUTCD, INCLUDING THE LATEST FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS. A TRAFFIC CONTROL PLAN SHALL BE SUBMITTED TO THE ENGINEER, CITY AND COUNTY FOR REVIEW AND APPROVAL PRIOR TO ANY CONSTRUCTION RELATED ACTIVITIES. PLANS SHALL COMPLY WITH ALL APPLICABLE PERMIT REQUIREMENTS.
3. THE EXISTING PAVEMENT CONDITIONS HAVE BEEN DOCUMENTED, AND ANY DAMAGE TO THE EXISTING PAVEMENT, STRIPING, AND SHOULDERING SHALL BE REPLACED BY THE CONTRACTOR, TO THE OWNERS SATISFACTION, AT NO ADDITIONAL COST TO THE OWNER.
4. TWO-WAY TRAFFIC SHALL BE MAINTAINED ON BLAKE RD/COUNTY ROAD 20 AT ALL TIMES.
5. TRAFFIC CONTROL SHALL ALSO INCLUDE ALL NECESSARY SIGNAGE AND MARKINGS REQUIRED FOR SIDEWALK CLOSURES.

ABBREVIATIONS

BV	BUTTERFLY VALVE
℄	CENTER LINE
CL	CLASS
CMP	CORRUGATE METAL PIPE
CY	CUBIC YARD
DIP	DUCTILE IRON PIPE
EL./ELEV	ELEVATION
EX	EXISTING
FES	FLARED END SECTION
F/F	FACE TO FACE
FM	FORCEMAIN
GV	GATE VALVE
HDPE	HIGH-DENSITY POLYETHYLENE
HP	HIGH POINT
HWL	HIGH WATER LEVEL
HYD	HYDRANT
INV	INVERT
LF	LINEAL FEET
LP	LOW POINT
MH	MANHOLE
NWL	NORMAL WATER LEVEL
PVC	POLYVINYL CHLORIDE
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
R/W	RIGHT-OF-WAY
SF	SQUARE FEET
STA	STATION
SY	SQUARE YARD
TNH	TOP NUT HYDRANT
TYP	TYPICAL
WM	WATERMAIN



HART HOWERTON

I hereby certify that this plan, specification, or supervision and I am a duly licensed Engineer under the laws of the State of Minnesota.  
 CHRISTOPHER MEE-AN  
 License No: 43000014 Date: 00/00/14

**COTTAGEVILLE PARK  
 PHASE 1**  
 Hopkins, Minnesota  
 Minnehaha Creek Watershed District

**S C A L E : AS SHOWN**  
NOTE: THIS DRAWING IS 24" X 36" IN SIZE. SCALE DRAWINGS USE FIGURED DIMENSIONS FIRST FOR MEASUREMENTS FROM ARCHITECT FOR MEASUREMENTS THAT ARE NOT INDICATED.

DATE	ISSUE
XX/XX/14	BID ISSUE

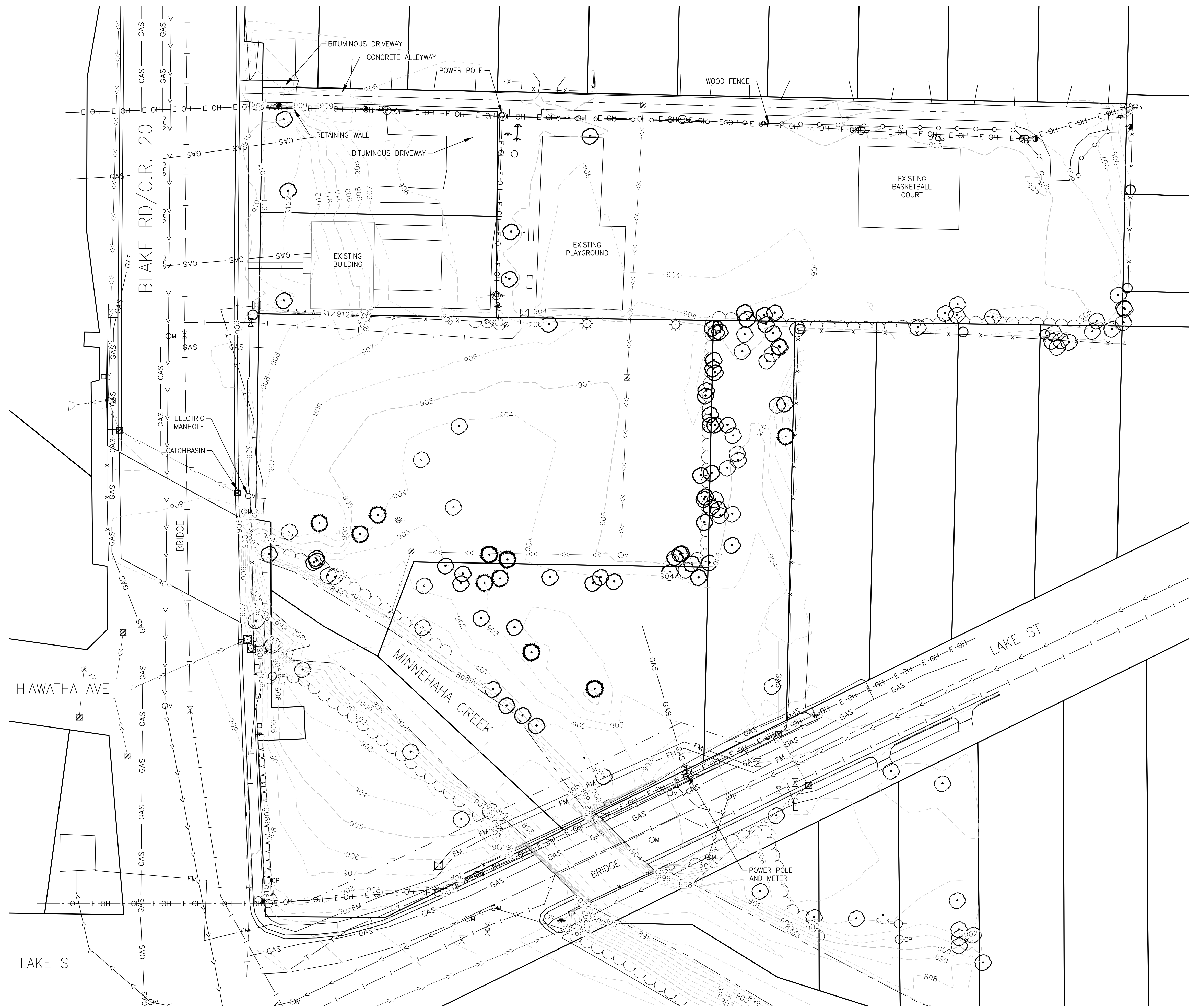
**REVISIONS**

NO	DATE	ISSUE

**DRAWING TITLE:**  
**GENERAL NOTES**

**PROJECT #:**  
 0185-5097  
**DRAWN BY:**  
 MJS  
**CHECKED BY:**  
 CJM

**DRAWING NO:**  
**G1.2**



**WARNING:**

THE CONTRACTOR SHALL BE RESPONSIBLE FOR CALLING FOR LOCATIONS OF ALL EXISTING UTILITIES. THEY SHALL COOPERATE WITH ALL UTILITY COMPANIES IN MAINTAINING THEIR SERVICE AND/OR RELOCATION OF LINES.

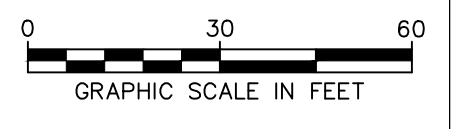
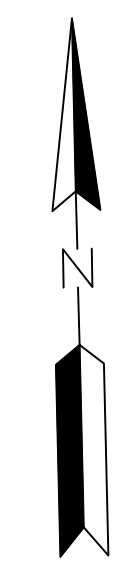
THE CONTRACTOR SHALL CONTACT GOPHER STATE ONE CALL AT 651-454-0002 AT LEAST 48 HOURS IN ADVANCE FOR THE LOCATIONS OF ALL UNDERGROUND WIRES, CABLES, CONDUITS, PIPES, MANHOLES, VALVES OR OTHER BURIED STRUCTURES BEFORE DIGGING. THE CONTRACTOR SHALL REPAIR OR REPLACE THE ABOVE WHEN DAMAGED DURING CONSTRUCTION AT NO COST TO THE OWNER.

CALL BEFORE YOU DIG  
**GOPHER STATE ONE CALL**  
 TWIN CITY AREA: 651-454-0002  
 TOLL FREE 1-800-252-1166

- GENERAL NOTES:
- EXISTING CONDITIONS HAVE BEEN PROVIDED BY WSB AND WENCK ASSOCIATES. EXISTING FEATURES MAY NOT BE EXACT TO THEIR LOCATION. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE CONDITIONS OF THE SITE AND SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY DISCREPANCIES OR VARIATIONS FROM THE DRAWINGS.
  - THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D. THE QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-2 ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA."
  - EXACT LOCATION OF UNDERGROUND UTILITIES SUCH AS GAS, TELEPHONE, FIBER OPTIC, PIPELINES, ELECTRICAL, AND CABLE TV ARE UNKNOWN.
  - ALL EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO ANY REMOVAL WORK.
  - THE RELOCATION AND OR PROTECTION OF ALL EXISTING UTILITIES MUST BE COORDINATED BY THE CONTRACTOR AND ANY COSTS FOR SUCH WORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR EXTRA TIME AND EFFORT OF PROVISIONS NECESSARY TO WORK AROUND OR UNDER ANY UTILITIES.

**LEGEND**

- APPROXIMATE PROPERTY LINE
- - - APPROXIMATE EASEMENT
- - - EXISTING MINOR CONTOUR
- - - EXISTING MAJOR CONTOUR
- → → EXISTING STORM SEWER
- → → EXISTING SANITARY SEWER
- FM EXISTING FORCEMAIN
- EXISTING WATERMAIN
- GAS UNDERGROUND GAS
- FO UNDERGROUND FIBER OPTIC
- T T UNDERGROUND TELEPHONE
- E-OH E-OH OVERHEAD ELECTRIC
- UC UNDERGROUND ELECTRIC



City of Hopkins  
 Wenck  
 Engineers • Scientists  
 Business Professionals

HART HOWERTON

I hereby certify that this plan, specification, or supervision and I am a duly licensed Engineer under the laws of the State of Minnesota.  
 License No: 43  
 Date: 11/14/14

**COTTAGEVILLE PARK  
 PHASE 1**  
 Hopkins, Minnesota  
 Minnehaha Creek Watershed District

SCALE: AS SHOWN  
 WITH DIMENSIONS IN FEET AND INCHES  
 SCALE DIMENSIONS USE FIGURED DIMENSIONS  
 UNLESS OTHERWISE SPECIFIED. DIMENSIONS FROM  
 ARCHITECT FOR MEASUREMENTS THAT ARE  
 NOT INDICATED.

DATE	ISSUE
XX/XX/14	BID ISSUE

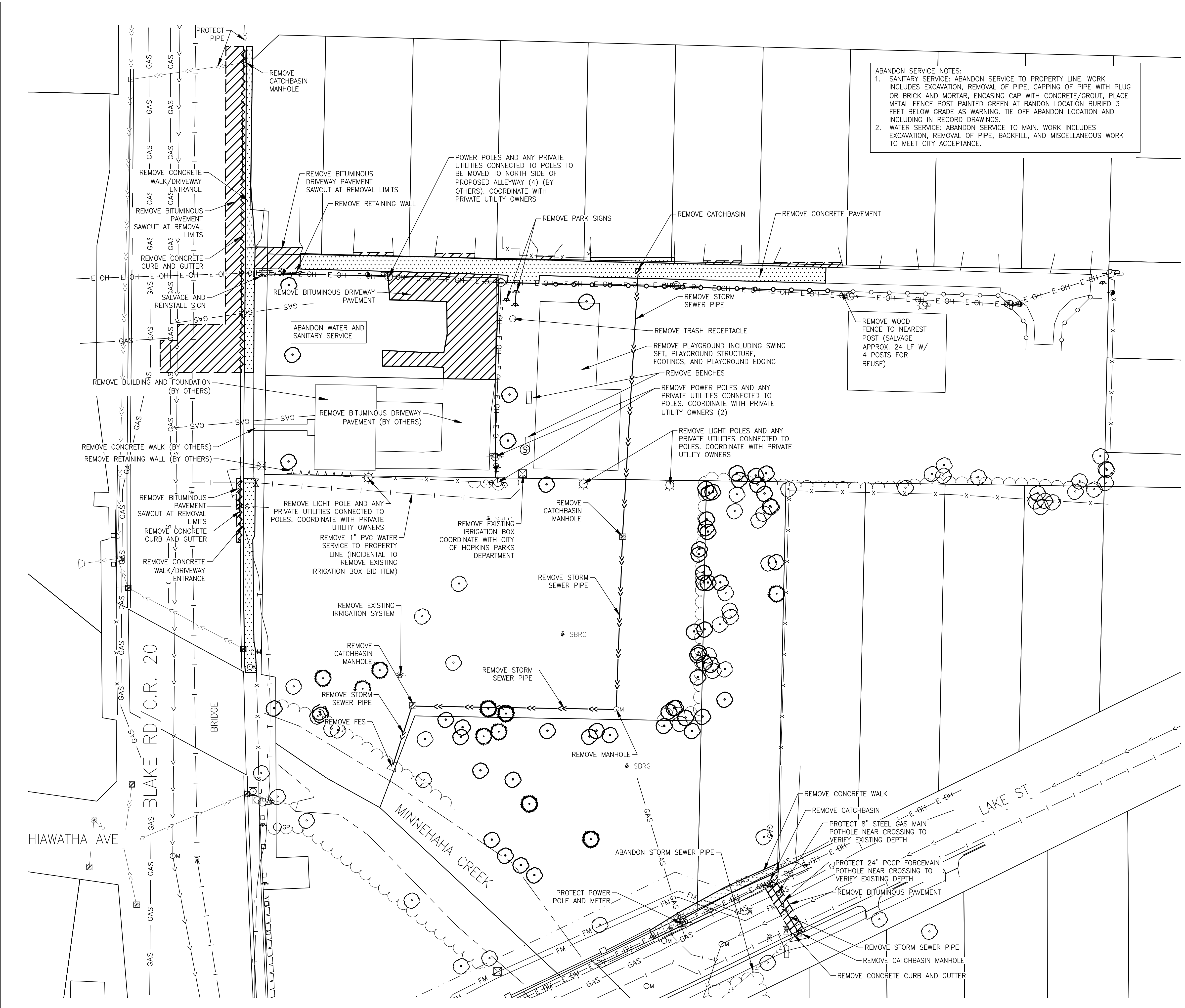
**REVISIONS**

NO.	DATE	ISSUE

**DRAWING TITLE:  
 EXISTING  
 CONDITIONS**

PROJECT #: 0185-5097  
 DRAWN BY: MJS  
 CHECKED BY: CJM

DRAWING NO:  
**C1.0**



**ABANDON SERVICE NOTES:**  
 1. SANITARY SERVICE: ABANDON SERVICE TO PROPERTY LINE. WORK INCLUDES EXCAVATION, REMOVAL OF PIPE, CAPPING OF PIPE WITH BRICK OR BRICK AND MORTAR, ENCASING CAP WITH CONCRETE/GROUT, PLACE METAL FENCE POST PAINTED GREEN AT ABANDON LOCATION BURIED 3 FEET BELOW GRADE AS WARNING. TIE OFF ABANDON LOCATION AND INCLUDING IN RECORD DRAWINGS.  
 2. WATER SERVICE: ABANDON SERVICE TO MAIN. WORK INCLUDES EXCAVATION, REMOVAL OF PIPE, BACKFILL, AND MISCELLANEOUS WORK TO MEET CITY ACCEPTANCE.

**WARNING:**  
 THE CONTRACTOR SHALL BE RESPONSIBLE FOR CALLING FOR LOCATIONS OF ALL EXISTING UTILITIES. THEY SHALL COOPERATE WITH ALL UTILITY COMPANIES IN MAINTAINING THEIR SERVICE AND/OR RELOCATION OF LINES.  
 THE CONTRACTOR SHALL CONTACT GOPHER STATE ONE CALL AT 651-454-0002 AT LEAST 48 HOURS IN ADVANCE FOR THE LOCATIONS OF ALL UNDERGROUND WIRES, CABLES, CONDUITS, PIPES, MANHOLES, VALVES OR OTHER BURIED STRUCTURES BEFORE DIGGING. THE CONTRACTOR SHALL REPAIR OR REPLACE THE ABOVE WHEN DAMAGED DURING CONSTRUCTION AT NO COST TO THE OWNER.

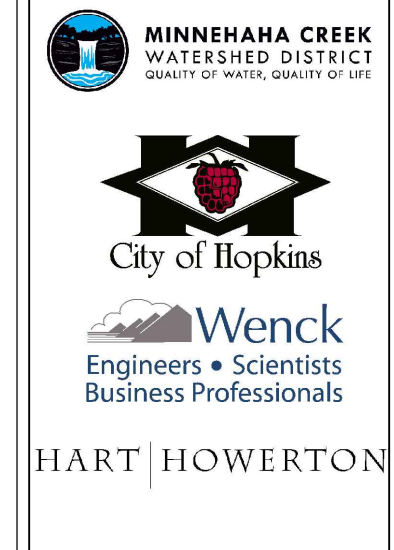
CALL BEFORE YOU DIG  
**GOPHER STATE ONE CALL**  
 TWIN CITY AREA: 651-454-0002  
 TOLL FREE 1-800-252-1166

- GENERAL NOTES:**
- EXISTING CONDITIONS HAVE BEEN PROVIDED BY WSB AND WENCK ASSOCIATES. EXISTING FEATURES MAY NOT BE EXACT TO THEIR LOCATION. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE CONDITIONS OF THE SITE AND SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY DISCREPANCIES OR VARIATIONS FROM THE DRAWINGS.
  - THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D. THE QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-2 ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA."
  - EXACT LOCATION OF UNDERGROUND UTILITIES SUCH AS GAS, TELEPHONE, FIBER OPTIC, PIPELINES, ELECTRICAL, AND CABLE TV ARE UNKNOWN.
  - ALL EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO ANY REMOVAL WORK.
  - THE RELOCATION AND OR PROTECTION OF ALL EXISTING UTILITIES MUST BE COORDINATED BY THE CONTRACTOR AND ANY COSTS FOR SUCH WORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR EXTRA TIME AND EFFORT OF PROVISIONS NECESSARY TO WORK AROUND OR UNDER ANY UTILITIES.
  - CONSTRUCTION STAGING LOCATION WILL BE DETERMINED BY OWNER AT THE PRE-CONSTRUCTION MEETING.

- REMOVAL NOTES:**
- FEATURES NOT SPECIFICALLY IDENTIFIED ON PLAN FOR SALVAGE OR REMOVAL THAT CONFLICT WITH CONSTRUCTION ARE TO BE REVIEWED WITH ENGINEER.
  - SEE SHEETS C1.2 AND C1.3 FOR TREE PRESERVATION AND TREE REMOVALS.
  - POTHOLE FORECMAIN NEAR PROPOSED STORM SEWER CROSSING ON LAKE ST TO VERIFY DEPTH PRIOR TO STARTING STORM SEWER WORK. COORDINATE W/ UTILITY OWNER.
  - POTHOLE GAS MAIN NEAR PROPOSED STORM SEWER CROSSING ON LAKE ST TO VERIFY DEPTH PRIOR TO STARTING STORM SEWER WORK. COORDINATE W/ UTILITY OWNER.

**LEGEND**

———	PROPERTY LINE
- - - - -	EXISTING MINOR CONTOUR
- - - - -	EXISTING MAJOR CONTOUR
———	EXISTING STORM SEWER
———	EXISTING SANITARY SEWER
FM	EXISTING FORCEMAIN
———	EXISTING WATERMAIN
———	UNDERGROUND GAS
———	UNDERGROUND FIBER OPTIC
———	UNDERGROUND TELEPHONE
E-OH	OVERHEAD ELECTRIC
———	UNDERGROUND ELECTRIC
~~~~~	REMOVE CONCRETE CURB AND GUTTER
	REMOVE BITUMINOUS PAVEMENT
.....	REMOVE CONCRETE SIDEWALK
- - - - -	SAWCUT BITUMINOUS PAVEMENT



HART HOWERTON

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and I am a duly licensed Engineer under the laws of the State of Minnesota.  
 REGISTRAR: MEE-AN Date: License No: 43

**COTTAGEVILLE PARK  
 PHASE 1**  
 Hopkins, Minnesota  
 Minnehaha Creek Watershed District

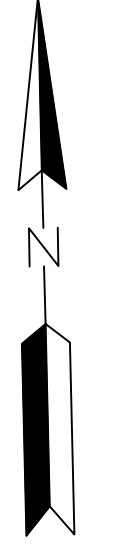
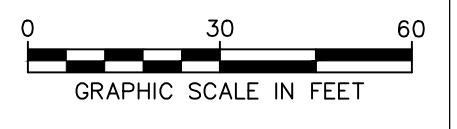
SCALE: AS SHOWN  
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 ARCHITECT FOR MEASUREMENTS THAT ARE NOT INDICATED.

DATE	ISSUE
XX/XX/14	BID ISSUE

REVISIONS		
NO.	DATE	ISSUE

**REMOVAL  
 PLAN**

PROJECT #: 0185-5097  
 DRAWN BY: MJS  
 CHECKED BY: GJM  
 DRAWING NO: **C1.1**

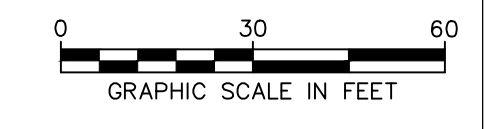
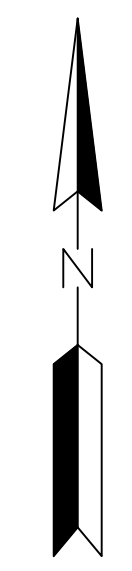




- TREE REMOVAL/PRESERVATION NOTES:**
1. SEE SHEET C1.3 FOR TREE PRESERVATION LIST.
  2. CONTRACTOR SHALL MEET WITH OWNER AND ENGINEER PRIOR TO BEGINNING TREE AND BRUSH REMOVALS.
  3. SEE LANDSCAPE DRAWINGS FOR NEW LOCATION OF TREES MARKED AS TRANSPLANT.
  4. ALL BRUSH REMOVAL IS CONSIDERED INCIDENTAL. ANY COMPENSATION SHALL BE INCLUDED IN THE BID ITEM CLEARING AND GRUBBING.
  5. STUMPS FOR TREES REMOVED ALONG MINNEHAHA CREEK SHALL REMAIN AS NOTED ON SEE SHEET C1.3.
  6. PROTECT EXISTING TREES THAT ARE NOT TO BE REMOVED. INSTALL ORANGE MESH FENCING, 4' HIGH, WITH STAKES EVERY 10 FEET, 5' OUTSIDE OF THE DRIPLINE OF ALL PRESERVED TREES, OR AT THE CONSTRUCTION LIMITS AS SHOWN ON THE PLAN. DO NOT PERFORM ACTIONS WITHIN THE PROTECTED AREA THAT MAY HARM THE TREE AND COMPACT THE SOIL, INCLUDING, BUT NOT LIMITED TO EXCAVATION, STORING MATERIALS, PARKING AND TRAFFIC DURING CONSTRUCTION. WHERE CONSTRUCTION REQUIRES DISTURBANCE WITHIN THE PROTECTED AREAS, DISTURB THE ROOT ZONE AS LITTLE AS POSSIBLE. TREE PROTECTION MEASURES SHALL BE CONFIRMED BY OWNER AND LANDSCAPE ARCHITECT PRIOR TO STARTING CONSTRUCTION.
  7. ALL TREE PROTECTION FENCING MUST BE IN PLACE PRIOR TO BEGINNING CONSTRUCTION AND TREE REMOVALS.
  8. OAK TREES SHALL BE PROTECTED WITH CONSTRUCTION FENCING A DISTANCE OF EQUAL TO 1.5 FEET TIMES THE TREE DIAMETER IN INCHES AT 4.5 FEET ABOUT GROUND.
  9. WHEN TREE ROOTS ARE ENCOUNTERED THAT MUST BE REMOVED, CUT ROOTS CLEANLY AS FAR FROM THE TREE AS POSSIBLE AND IMMEDIATELY WATER AND BACKFILL OVER THE ROOTS TO PREVENT DRYING.

**LEGEND**

- PRESERVE TREE
- REMOVE TREE
- BRUSH REMOVAL AREA



I hereby certify that this plan, specification, or contract was prepared by me or under my direct supervision and I am a duly licensed Engineer under the laws of the State of Minnesota.

T. Voon Signature: T. Voon  
 License No.: 431111  
 Date: 11/11/14

**COTTAGEVILLE PARK  
 PHASE 1**

Hopkins, Minnesota  
 Minnehaha Creek Watershed District

SCALE: AS SHOWN  
 NOTE: DIMENSIONS ARE IN FEET UNLESS OTHERWISE NOTED.  
 SCALE DRAWINGS USE FIGURED DIMENSIONS.  
 DIMENSIONS FOR BRICK, CONCRETE, AND OTHER MATERIALS SHALL BE AS SHOWN ON THE DRAWING.  
 ARCHITECT'S FOR MEASUREMENTS THAT ARE NOT INDICATED.

DATE	ISSUE
XX/XX/14	BID ISSUE

**REVISIONS**

NO.	DATE	ISSUE

DRAWING TITLE:  
**TREE PRESERVATION PLAN**

PROJECT #: 0185-5097  
 DRAWN BY: MJS  
 CHECKED BY: CJM

DRAWING NO:  
**C1.2**

TREE ID	COMMON NAME	SCIENTIFIC NAME	DBH (IN.)	STATUS	COMMENTS
1	AS	<i>Fraxinus pennsylvanica</i>	2	REMO	
2	AS	<i>Fraxinus pennsylvanica</i>	2	REMO	
3	AS	<i>Fraxinus pennsylvanica</i>	22	REMO	
4	ELM	<i>Ulmus americana</i>	3	RESER	
5	ELM	<i>Ulmus americana</i>		RESER	
	ELM	<i>Ulmus americana</i>	5	RESER	
7	A	<i>Celtis occidentalis</i>	7	RESER	
	ELM	<i>Ulmus americana</i>	23	RESER	
	ELM	<i>Ulmus americana</i>		RESER	
10	BO	<i>Acer negundo</i>	15	RESER	
11	AS	<i>Fraxinus pennsylvanica</i>	12	RESER	
12	BASS	<i>Tilia americana</i>		RESER	
13	AS	<i>Fraxinus pennsylvanica</i>	1	RESER	
14	BASS	<i>Tilia americana</i>		RESER	
15	BASS	<i>Tilia americana</i>		RESER	
16	SIL	<i>Acer saccharinum</i>	3	RESER	
17	RAB	<i>Malus sp.</i>	5	RESER	
18	M	<i>Morus alba</i>		RESER	
19	BASS	<i>Tilia americana</i>		RESER	
20	M	<i>Morus alba</i>	4	RESER	
21	M	<i>Morus alba</i>		RESER	
22	DEAD	NA	5	REMO	
23	ATAL	<i>Catalpa speciosa</i>	4	REMO	
24	M	<i>Morus alba</i>	4	REMO	
25	AS	<i>Fraxinus pennsylvanica</i>	4	REMO	
26	ELM	<i>Ulmus americana</i>	5	REMO	
27	ALN	<i>Juglans nigra</i>	21	RESER	
28	ALN	<i>Juglans nigra</i>	22	RESER	
29	M	<i>Morus alba</i>	4	REMO	
30	M	<i>Morus alba</i>	5	REMO	
31	RAB	<i>Malus sp.</i>	5	REMO	
32	A	<i>Celtis occidentalis</i>	4	REMO	
33	ELM	<i>Ulmus americana</i>	11	REMO	
34	AS	<i>Fraxinus pennsylvanica</i>	4	REMO	
35	ALN	<i>Juglans nigra</i>	1	REMO	
36	ALN	<i>Juglans nigra</i>	14	REMO	
37	ELM	<i>Ulmus americana</i>	4	REMO	
38	ELM	<i>Ulmus americana</i>	21	REMO	
39	ALN	<i>Juglans nigra</i>	4	RESER	
40	ALN	<i>Juglans nigra</i>	1	RESER	
41	ALN	<i>Juglans nigra</i>	1	RESER	
42	ELM	<i>Ulmus americana</i>	12	REMO	
43	ALN	<i>Juglans nigra</i>		RESER	
44	S	<i>Picea glauca</i>	1	RESER	
45	ALN	<i>Juglans nigra</i>	15	RESER	
46	AS	<i>Fraxinus pennsylvanica</i>	5	REMO	
47	M	<i>Morus alba</i>	5	REMO	
48	AS	<i>Fraxinus pennsylvanica</i>	11	REMO	
49	ELM	<i>Ulmus americana</i>		REMO	
50	M	<i>Morus alba</i>	17	RESER	
51	M	<i>Morus alba</i>	14	RESER	
52	M	<i>Morus alba</i>		RESER	
53	ALN	<i>Juglans nigra</i>	7	REMO	
54	AS	<i>Fraxinus pennsylvanica</i>	4	REMO	
55	AS	<i>Fraxinus pennsylvanica</i>	4	REMO	
56	AS	<i>Fraxinus pennsylvanica</i>	5	REMO	
57	A	<i>Celtis occidentalis</i>	5	RESER	
58	AS	<i>Fraxinus pennsylvanica</i>	7	REMO	
59	ELM	<i>Ulmus americana</i>	5	REMO	
60	ALN	<i>Juglans nigra</i>		RESER	
61	M	<i>Morus alba</i>	1	RESER	
62	ELM	<i>Ulmus americana</i>	7	REMO	
63	M	<i>Morus alba</i>	34	REMO	
64	ELM	<i>Ulmus americana</i>		REMO	

TREE ID	COMMON NAME	SCIENTIFIC NAME	DBH (IN.)	STATUS	COMMENTS
65	ELM	<i>Ulmus americana</i>	13	REMO	
66	ELM	<i>Ulmus americana</i>	1	REMO	
67	BO	<i>Acer negundo</i>	4	RESER	
68	SIBERIAN ELM	<i>Ulmus pumila</i>		REMO	
69	ELM	<i>Ulmus americana</i>		REMO	
70	ELM	<i>Ulmus americana</i>	13	REMO	
71	ELM	<i>Ulmus americana</i>	12	REMO	
72	ELM	<i>Ulmus americana</i>	22	REMO	
73	ALN	<i>Juglans nigra</i>		REMO	
74	ELM	<i>Ulmus americana</i>	1	REMO	
75	M	<i>Morus alba</i>	15	REMO	
76	R	<i>Pinus resinosa</i>		REMO	
77	S	<i>Pinus sylvestris</i>		REMO	
78	S	<i>Picea sp.</i>	2	RESER	
79	S	<i>Picea sp.</i>	3	RESER	
80	ALN	<i>Juglans nigra</i>	7	REMO	
81	BASS	<i>Tilia americana</i>	7	REMO	
82	ELM	<i>Ulmus americana</i>		REMO	
83	A	<i>Malus sp.</i>	1	REMO	
84	A	<i>Malus sp.</i>	15	REMO	
85	S	<i>Picea sp.</i>	1	REMO	
86	S	<i>Picea sp.</i>	1	REMO	
87	OA	<i>Quercus sp.</i>	4	RESER	
88	ELM	<i>Ulmus americana</i>	7	REMO	ST
89	ELM	<i>Ulmus americana</i>	1	REMO	ST
90	ELM	<i>Ulmus americana</i>	17	REMO	ST
91	AS	<i>Fraxinus pennsylvanica</i>		REMO	ST
92	B	<i>Quercus macrocarpa</i>	24	RESER	
93	I	<i>Salix sp.</i>	1	RESER	
94	A	<i>Malus sp.</i>	12	RESER	
95	AS	<i>Fraxinus pennsylvanica</i>	7	REMO	ST
96	I	<i>Salix sp.</i>	1	RESER	
97	AS	<i>Fraxinus pennsylvanica</i>	1	REMO	ST
98	ELM	<i>Ulmus americana</i>	14	REMO	ST
99	E	<i>Sorbus aucuparia</i>	22	RESER	
100	S	<i>Picea sp.</i>		RESER	
101	S	<i>Picea sp.</i>		RESER	
102	S	<i>Picea sp.</i>	11	RESER	
103	O	<i>Populus deltoides</i>	2	RESER	
104	SIBERIAN ELM	<i>Ulmus pumila</i>	24	REMO	
105	BO	<i>Acer negundo</i>	1	RESER	
106	ELM	<i>Ulmus americana</i>	13	RESER	
107	O	<i>Populus deltoides</i>	24	RESER	
108	ELM	<i>Ulmus americana</i>	1	RESER	
109	AS	<i>Fraxinus pennsylvanica</i>	13	REMO	
110	SIL	<i>Acer saccharinum</i>	32	RESER	
111	AS	<i>Fraxinus pennsylvanica</i>	2	RESER	
112	BIR	<i>Betula papyrifera</i>	11	RESER	
113	B	<i>Quercus macrocarpa</i>	2	RESER	
114	ELM	<i>Ulmus americana</i>		RESER	
115	ELM	<i>Ulmus americana</i>	12	RESER	
116	AS	<i>Fraxinus pennsylvanica</i>		RESER	
117	B	<i>Quercus macrocarpa</i>	3	RESER	
118	B	<i>Quercus macrocarpa</i>	4	RESER	
119	B	<i>Quercus macrocarpa</i>	32	RESER	
120	B	<i>Quercus macrocarpa</i>	2	RESER	
121	MA	<i>Acer saccharum</i>	4	REMO	
122	A	<i>Celtis occidentalis</i>	3	REMO	
123	TREE LILA	<i>Syringa reticulata</i>	3	REMO	
124	GREEN AS	<i>Fraxinus pennsylvanica</i>	1	RESER	
125	SIL	<i>Acer saccharinum</i>	22	REMO	
126	SIL	<i>Acer saccharinum</i>	24	REMO	
127	SIL	<i>Acer saccharinum</i>	12	REMO	



HART HOWERTON

I hereby certify that this plan, specification, or drawing was prepared by me or under my direct supervision and I am a duly licensed Engineer under the laws of the State of Minnesota.

T. Voon Signature: [Signature] MEE - AN Date: [Date]  
 License No: 43 [Number]

COTTAGEVILLE PARK  
 PHASE 1

Hopkins, Minnesota  
 Minnehaha Creek Watershed District

SCALE: AS SHOWN  
 WITH DIMENSIONS IN FEET AND INCHES  
 SCALE DRAWINGS USE FIGURED DIMENSIONS  
 UNLESS OTHERWISE SPECIFIED FROM THE  
 ARCHITECT FOR MEASUREMENTS THAT ARE  
 NOT INDICATED

DATE	ISSUE
XX/XX/14	BID ISSUE

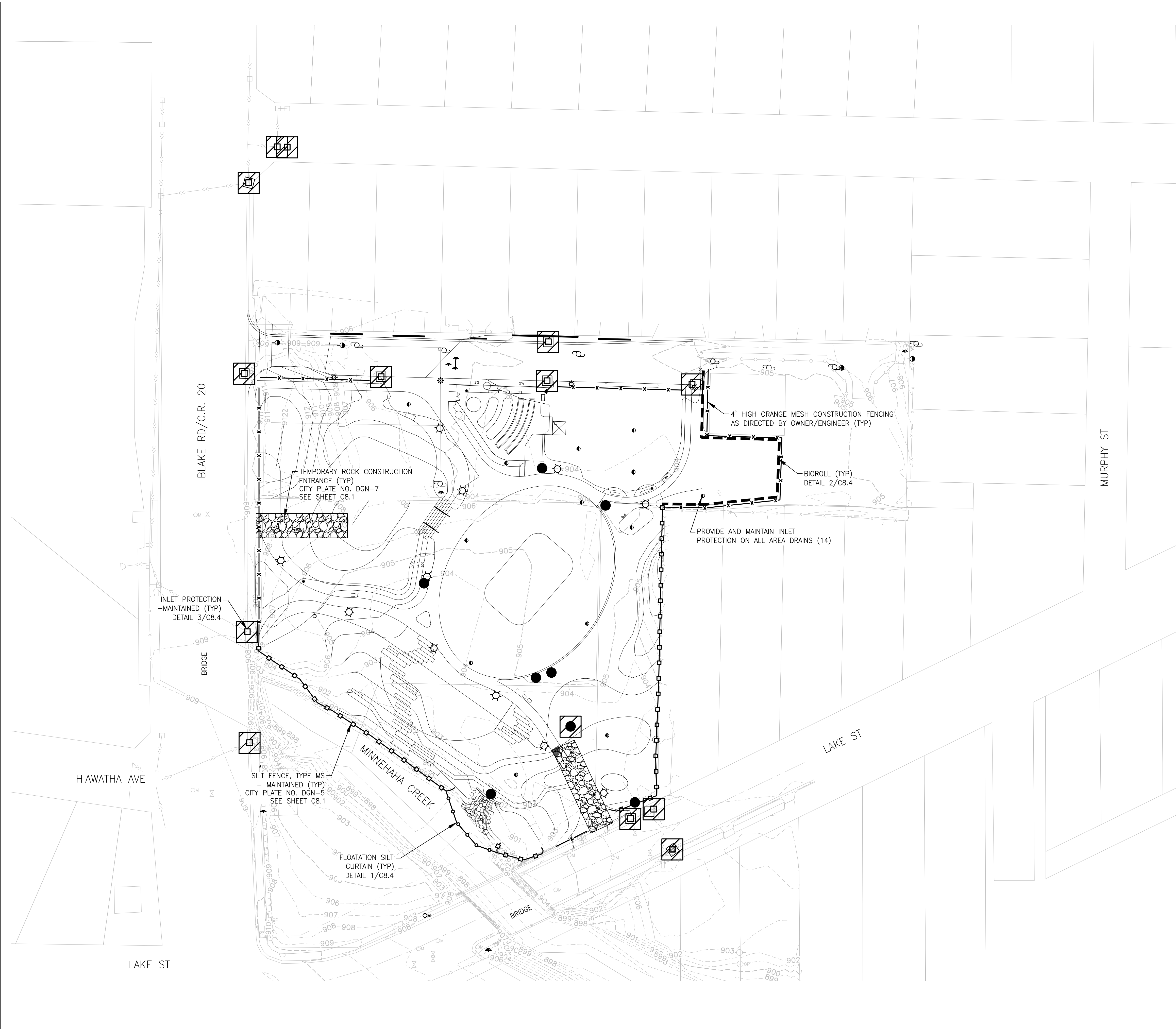
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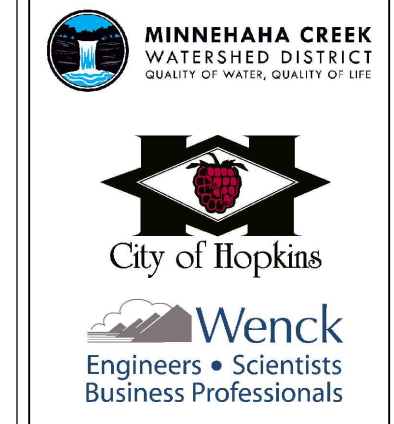
DRAWING TITLE:  
 TREE PRESERVATION LIST

PROJECT #: 0185-5097  
 DRAWN BY: MJS  
 CHECKED BY: CJM

DRAWING NO:  
 C1.3



- EROSION CONTROL NOTES:
1. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED DEPENDING ON SITE CONDITIONS DURING CONSTRUCTION. COORDINATE WITH ENGINEER.
  2. CONCRETE WASH-OUT SHALL COMPLETED OFF-SITE OR CONCRETE READY MIX TRUCKS SHALL BE SELF-CONTAINED.
  3. SEE LANDSCAPE DRAWINGS FOR FINAL STABILIZATION PLAN.
  4. SEE SHEET C2.1 FOR TEMPORARY STABILIZATION REQUIREMENTS.



HART HOWERTON

I hereby certify that this plan, specification, or supervision and I am a duly licensed Engineer under the laws of the State of Minnesota.  
 ENGINEER: MEE-AN  
 License No: 43  
 Date: 00/00/14

**COTTAGEVILLE PARK  
 PHASE 1**  
 Hopkins, Minnesota  
 Minnehaha Creek Watershed District

SCALE: AS SHOWN  
 NOTE: DIMENSIONS ARE IN FEET UNLESS OTHERWISE NOTED.  
 SCALE DRAWINGS USE FIGURED DIMENSIONS UNLESS OTHERWISE NOTED.  
 ARCHITECT FOR MEASUREMENTS THAT ARE NOT INDICATED.

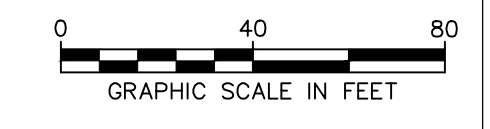
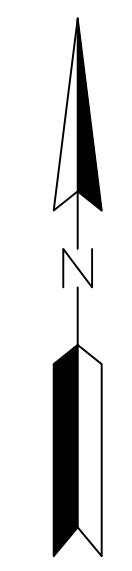
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XX/XX/14	BID ISSUE

REVISIONS		
NO.	DATE	ISSUE

DRAWING TITLE:  
**EROSION CONTROL PLAN**

PROJECT #: 0185-5097  
 DRAWN BY: MJS  
 CHECKED BY: CJM  
 DRAWING NO:

**C2.0**





**EROSION AND SEDIMENT CONTROL PRACTICES**

Prior to any site disturbance the erosion prevention measures, including biorolls, silt fence and silt curtain will be installed at the site as shown on Sheet C2.0.

All exposed soil areas within 7 days or as soon as possible must have temporary erosion protection (slash mulch, erosion control blanket, seed) or permanent cover year round.

CONTRACTOR shall implement appropriate construction phasing, vegetative buffer strips, horizontal slope grading, and other construction practices that minimize erosion when practical.

The normal wetted perimeter of any temporary or permanent drainage ditch that drains water from a construction site, or diverts water around a site, must be stabilized within 200 lineal feet from the property edge, or from the point of discharge to any surface water. Stabilization must be completed within 24 hours of connecting to a surface water. Pipe outlets must be provided with temporary or permanent energy dissipation within 24 hours of connection to a surface water.

Sediment control practices must minimize sediment from entering surface waters, including curb and gutter systems and storm sewer inlets. The following measures will be taken as sediment control practices in order to minimize sediments from entering surface waters:

1. Installation of sediment control practices on all down gradient perimeters prior to land disturbing activities.
2. Minimize vehicle tracking by use of the rock construction entrances.
3. Street sweeping of tracked sediment when necessary.



**Cumulative Impervious Surface**

There is 0.55 acres of new impervious surface added as part of this project.

**Total Area Disturbed by Construction** - 3.30 acres

**Construction Dates:** March 2015-November 2015

Party Responsible for Long Term Operation and Maintenance of the Site - OWNER: Minnehaha Creek Watershed District

Party Responsible for Implementation of the SWPPP - CONTRACTOR: TBD

**Inspections**

The inspection log will be completed by the CONTRACTOR for the construction site. Inspections at the site will be completed as follows:  
Once every seven (7) days during active construction and,  
Within 24 hours after a rainfall event greater than 0.5 inches in 24 hours.

The individual performing inspections must be trained as required by part IV.E of the Permit. CONTRACTOR to provide OWNER with proof of training. Inspections must include stabilized areas, erosion prevention and sediment control BMPs, and infiltration areas. Corrective actions must be identified and date of correction must be noted as identified in Section IV.E. of the Permit.

**Final Stabilization**

All areas disturbed by construction will receive seed and mulch or sod according to the plans and specifications and within the specified vegetative time schedule. Final stabilization will occur when the site has a uniform vegetative cover with a density of 70% over the entire disturbed area. All temporary synthetic erosion prevention and sediment control BMPs (such as silt fence) must be removed as part of the site final stabilization. All sediment must be cleaned out of conveyances and temporary sedimentation basins if applicable.

Notice of Termination (NOT) must be submitted within 30 days of final stabilization.

**Record Retention**

The SWPPP, all changes to it, and inspection and maintenance records must be kept on-site during construction. The OWNER must retain a copy of the SWPPP along with the following records for three (3) years after submittal of the Notice of Termination.

1. Any other permits required for the project;
2. Records of all inspection and maintenance conducted during construction;
3. All permanent operations and maintenance agreements that have been implemented, including all right of way, contract, covenants and other binding requirements regarding perpetual maintenance; and
4. All required calculations for design of the temporary and permanent stormwater management systems.

**Pollution Prevention Measures**

**Solid Waste**

Solid waste, including but not limited to, collected asphalt and concrete millings, floating debris, paper, plastic, fabric, construction and demolition debris and other waste must be disposed of properly and must comply with MPCA disposal requirements.

**Hazardous Materials**

Hazardous materials, including but not limited to oil, gasoline, paint and any hazardous substance must be properly stored including secondary containments, to prevent spills, leaks or other discharge. Restricted access to storage areas must be provided to prevent vandalism. Storage and disposal of hazardous waste must be in compliance with MCPA regulations.

**Washing of Construction Vehicles**

External washing of trucks and other construction vehicles must be limited to a defined area of the site. Runoff must be contained and waste properly disposed of. No engine degreasing is allowed on site.

**Concrete Washout Area**

Concrete work is anticipated for portions of this project. Contractor shall use self contained trucks or washout concrete offsite.



**IMPAIRED WATERS, SPECIAL WATERS, AND WETLANDS**

This Project is not located within 1 mile of a special water.

This Project is not located within 1 mile of an impaired water (see Figure above)

**GENERAL SWPPP NOTES:**

- Dewatering is anticipated to complete portions of the excavation for this project. CONTRACTOR must comply with permit requirements and project specifications for dewatering.

- Because the project is less than 5 acres, temporary sedimentation basins are not required.

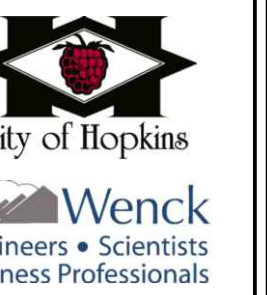
UNIVERSITY OF MINNESOTA

**Heather S Libby**

Construction Site Management (May 31 2015)  
Design of Construction SWPPP (May 31 2017)

If your certification expires on May 31, 2015, you must take a class in Winter 2014-2015 to maintain certification.

**CERTIFICATION**  
In accordance with Part III.A.2.a.i. of the General Permit Authorization to Discharge Stormwater Associated with Construction Activity under the NPDES, the preparer of this document was trained under the University of Minnesota Erosion and Sediment Control Certification Program. Ms. Heather Libby's certification in Design of SWPPP is valid through May 31, 2017.



HART HOWERTON

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly licensed engineer under the laws of the State of Minnesota.  
CHRISTOPHER L. MEEHAN  
License No. 43111  
Date: 05/01/14

COTTAGEVILLE PARK  
PHASE 1

Hopkins, Minnesota  
Minnehaha Creek Watershed District

SCALE: AS SHOWN  
NOTE: THIS DRAWING IS NOT TO BE USED FOR ANY OTHER PURPOSES. THE FIELD DIMENSIONS ONLY OR OTHER LABORATORY TESTS ARE THE BASIS FOR MEASUREMENTS THAT ARE NOT INDICATED.

DATE	ISSUE
XX/XX/14	BID ISSUE

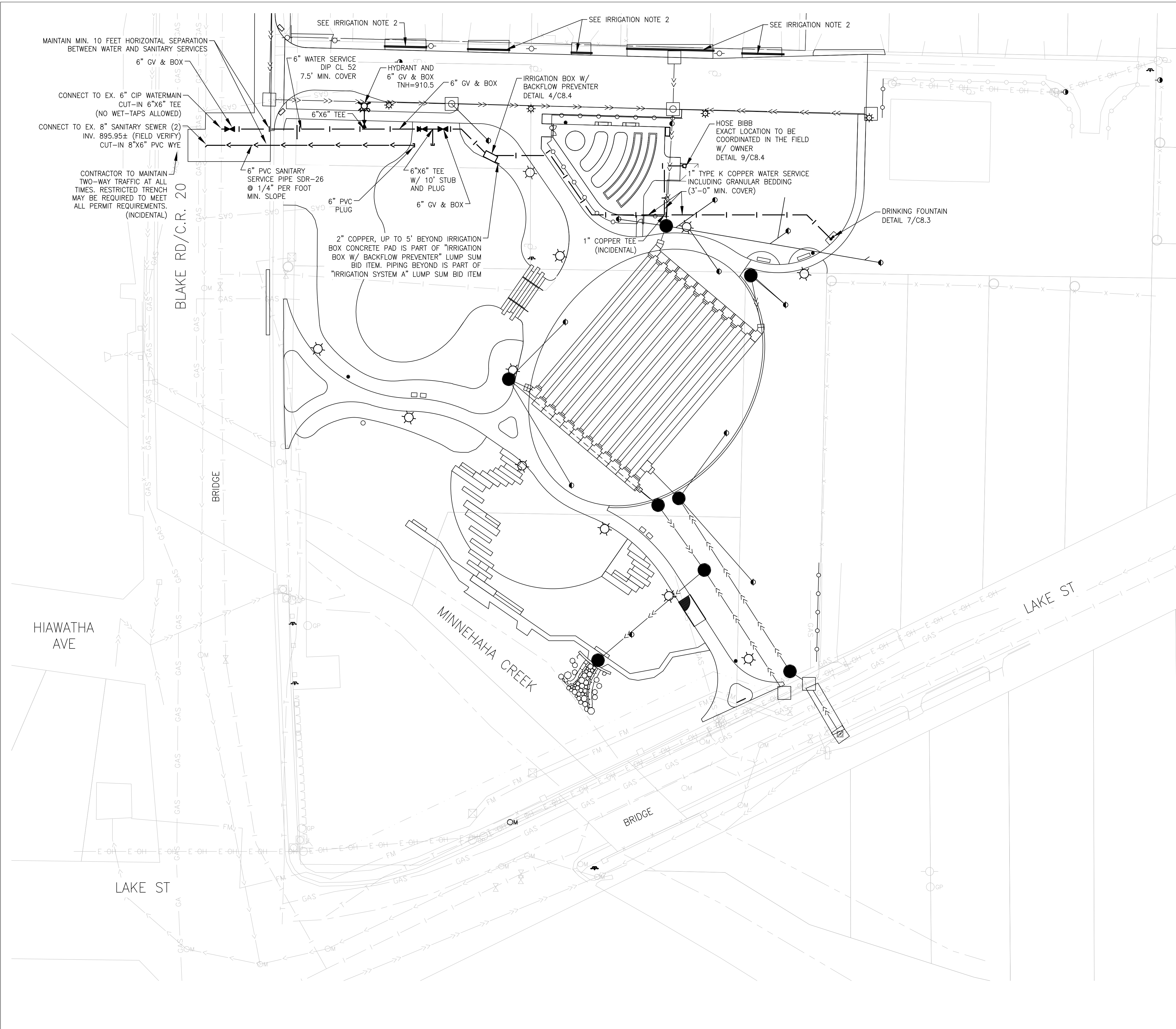
REVISIONS

NO.	DATE	ISSUE

DRAWING TITLE:  
**SWPPP**

PROJECT #:  
0185-5097  
DRAWN BY:  
MJS  
CHECKED BY:  
CJM

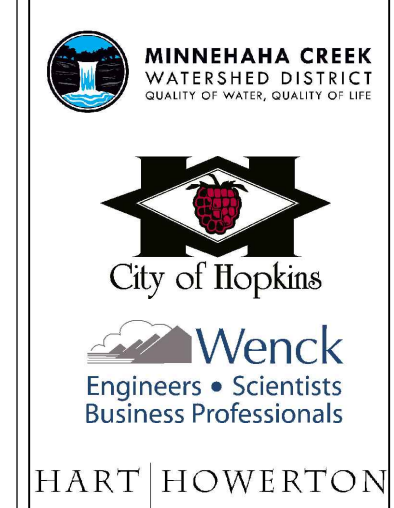
DRAWING NO:  
**C2.1**



- SANITARY SERVICE NOTES:**
1. SANITARY SERVICE SHALL BE 6" PVC SDR-26.
  2. SANITARY SERVICE SHALL SLOPE AT MINIMUM 1/4" PER FOOT.
  3. PIPE BEDDING FOR SANITARY SERVICE SHALL CONFORM TO ASTM D-2321 AND CITY OF HOPKINS STANDARD DETAIL SS-5 (INCIDENTAL). SEE SHEET C8.1.
  4. SANITARY SERVICE CONNECTION SHALL CONFORM TO CITY OF HOPKINS STANDARD DETAIL SS-2. SEE SHEET C8.1.
  5. PROVIDE PLUG AT SANITARY SERVICE STUB FOR FUTURE PHASE CONNECTION.
  6. PROVIDE METAL FENCE POST AT END OF SANITARY SERVICE STUB, 4' ABOVE GRADE. SANITARY FENCE POST SHALL BE PAINTED GREEN.

- WATER SERVICE NOTES:**
1. WATER SERVICE SHALL BE 6" DIP CL 52 UNLESS NOTED OTHERWISE.
  2. PIPE BEDDING FOR WATER SERVICE SHALL CONFORM TO CITY OF HOPKINS STANDARD DETAIL SS-5 (INCIDENTAL). SEE SHEET C8.1.
  3. WATER SERVICE TO MAINTAIN A MINIMUM COVER OF 7.5', UNLESS OTHERWISE NOTED, OVER-DEPTH INCIDENTAL.
  4. HYDRANT ELEVATIONS ARE GIVEN TO TOP NUT.
  5. ALL HYDRANTS, VALVES, AND FITTINGS SHALL BE EQUIPPED WITH STAINLESS STEEL BOLTS. HYDRANT AND GATE VALVE SHALL CONFORM TO CITY OF HOPKINS CITY PLATE NUMBERS W-2, W-3, W-4, AND W-6. SEE SHEET C8.3.
  6. MEGALUG LOCATIONS SHALL CONFORM TO CITY PLATE NUMBER W-3. SEE SHEET C8.3.
  7. MAINTAIN 24" SEPARATION BETWEEN ALL UTILITY CROSSINGS.
  8. PROVIDE METAL FENCE POST AT END OF WATER SERVICE STUBS, 4' ABOVE GRADE. WATER FENCE POST SHALL BE PAINTED BLUE.
  9. PROVIDE CONCRETE THRUST BLOCKING FOR WATER SERVICE PIPING PER DETAIL 5/C8.3 (INCIDENTAL).
  10. COPPER COUPLINGS FOR 1" TYPE K WATER SERVICE SHALL BE THREE PART FLARE COUPLING.

- IRRIGATION NOTES:**
1. ONLY IRRIGATION SLEEVES FOR DRIVEWAYS ON NORTH SIDE OF ALLEYWAY SHOWN. SEE LANDSCAPE DRAWINGS FOR ALL OTHER IRRIGATION AND IRRIGATION SLEEVES.
  2. PROVIDE (2) 4" SCH 40 SLEEVES AT THESE LOCATIONS. MINIMUM 18" COVER. EXTEND SLEEVES 18" BEYOND EDGE OF PAVING AND MARK WITH 2"x2" WOOD STAKE AT EACH END, PAINTED WHITE. IRRIGATION SLEEVES ARE INCIDENTAL TO THE IRRIGATION SYSTEM A BID ITEM.



HART HOWERTON

I hereby certify that this plan, specification, or estimate was prepared by me or under my direct supervision and I am a duly licensed Engineer under the laws of the State of Minnesota.  
 License No: 43000014  
 Date: 01/14/14

**COTTAGEVILLE PARK  
 PHASE 1**  
 Hopkins, Minnesota  
 Minnehaha Creek Watershed District

SCALE: AS SHOWN  
 NOTE: THESE DRAWINGS ARE 25% OF THE FULL SCALE DRAWINGS. USE FIGURED DIMENSIONS ONLY FOR FIELD CONSTRUCTION FROM ARCHITECT FOR MEASUREMENTS THAT ARE NOT INDICATED.

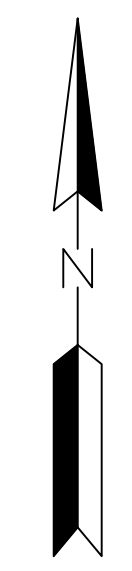
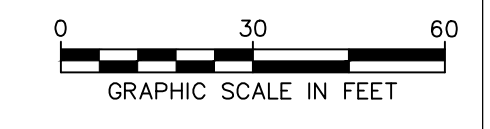
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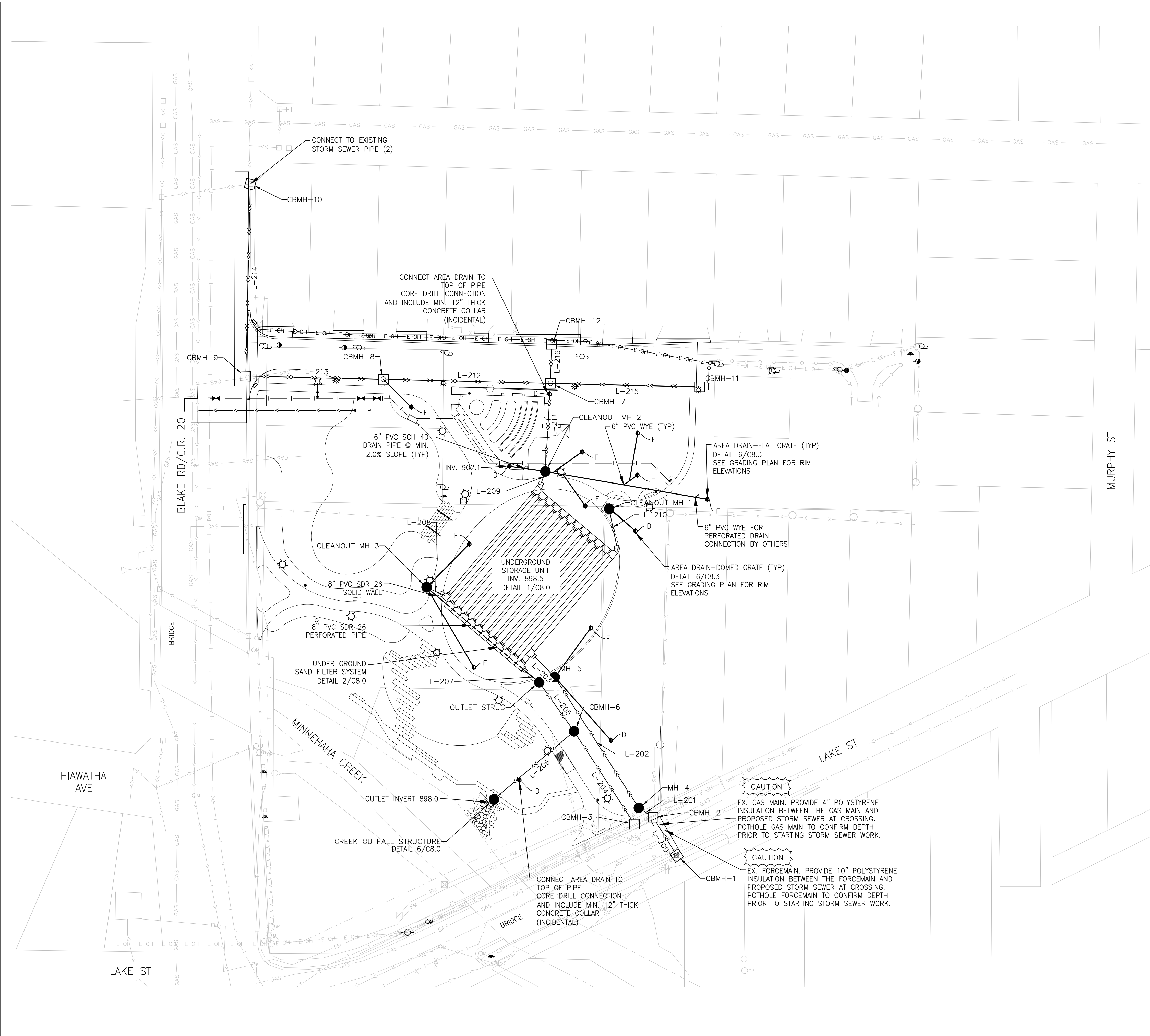
REVISIONS		
NO.	DATE	ISSUE

DRAWING TITLE:  
**UTILITY PLAN**

PROJECT #: 0185-5097  
 DRAWN BY: MJS  
 CHECKED BY: CJM  
 DRAWING NO:

**C4.0**





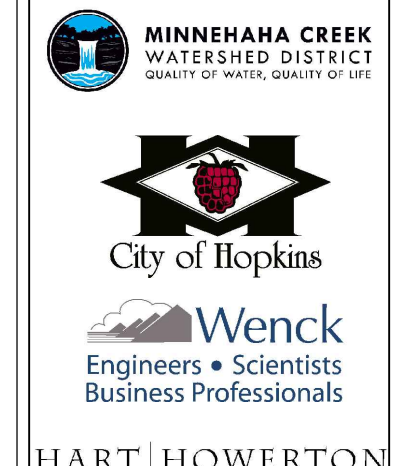
STRUCTURE TABLE			
STRUCTURE	DETAIL	CASTING	SIZE
CBMH-1	ST 2001	R 307	2'3"
CBMH-2	ST 5001	R 307	4' DIA.
CBMH-3	ST 2001	R 307	2'3"
MH-4	4000	R 142	7' DIA.
MH-5	ST 5001	R 142	4' DIA.
CBMH-6	ST 5001	R 2577	7' DIA.
CBMH-7	ST 5001	R 307	4' DIA.
CBMH-8	ST 5001	R 307	4' DIA.
CBMH-9	ST 5001	R 307	4' DIA.
CBMH-10	5000	R 307	4' DIA.
CBMH-11	7000	R 2577	27" DIA.
CBMH-12	ST 5001	R 307	4' DIA.
CLEANOUT MH 1	ST 5001	R 142	7' DIA.
CLEANOUT MH 2	4000	R 142	7' DIA.
CLEANOUT MH 3	ST 5001	R 142	7' DIA.
OUTLET STRUCTURE	3000	R 142	7' DIA.
CREED OUT ALL STRUCTURE *	3000	R 142	3000

\*NOTE: CREEK OUTFALL STRUCTURE INCLUDES 6'X6' BOX, ADJUSTMENT, RINGS, CASTING, HEADWALL, STONE VENEER, RAILING, AND OTHER APPURTENANCES.

STORM SEWER PIPE TABLE				
LINE	SIZE	MATERIAL	LENGTH	GRADE
L200	12"	R	37 L	113"
L201	12"	R	14 L	112"
L202	12"	R	127 L	122"
L203	12"	R	23 L	1100"
L204	15"	R	11 L	113"
L205	43.75" (21.3" AR)	R	4 L	113"
L206	43.75" (21.3" AR)	R	11 L	114"
L207	3"	R	14 L	1100"
L208	4"	R	11 L	1100"
L209	4"	R	1 L	1100"
L210	4"	R	31 L	1100"
L211	1"	R	72 L	147"
L212	1"	R	13 L	144"
L213	1"	R	112 L	147"
L214	1"	R	157 L	151"
L215	12"	R	122 L	1100"
L216	1"	R	32 L	117"

- STORM SEWER NOTES:
- PIPE BEDDING FOR PVC PIPES SHALL CONFORM TO ASTM D-2321 AND CITY OF HOPKINS STANDARD DETAIL SS-5 (INCIDENTAL). SEE SHEET C8.1.
  - PIPE BEDDING FOR RC PIPE SHALL CONFORM TO CITY OF HOPKINS STANDARD DETAIL ST-6. SEE SHEET C8.1.
  - LOCATION OF STORM SEWER STRUCTURES IS APPROXIMATE. EXACT STRUCTURE LOCATION SHALL BE COORDINATED SO CASTING MATCHES CURB LINE (IF APPLICABLE).

- DEWATERING NOTES:
- CONTRACTOR SHOULD ANTICIPATE GROUND WATER. A BID ITEM HAS BEEN PROVIDED FOR DEWATERING AS ALL DEWATERING WORK NECESSARY FOR CONSTRUCTION.
  - CONTRACTOR RESPONSIBLE TO SUBMIT DEWATERING PLAN TO ENGINEER FOR REVIEW. DEWATERING SHALL MEET ALL PERMIT REQUIREMENTS AND BE APPROVED PRIOR TO STARTING ANY CONSTRUCTION ACTIVITIES.



HART HOWERTON

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and I am a duly licensed Engineer under the laws of the State of Minnesota.  
 LICENSE NO. 43000014  
 DATE: 08/14/14

**COTTAGEVILLE PARK  
 PHASE 1**  
 Hopkins, Minnesota  
 Minnehaha Creek Watershed District

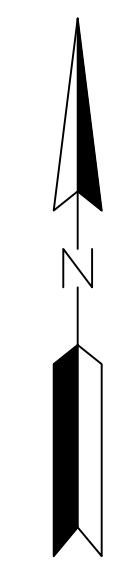
SCALE: AS SHOWN  
 NOTE: DIMENSIONS IN 1/4" = 1'-0" SCALE DRAWINGS USE FIGURED DIMENSIONS UNLESS OTHERWISE NOTED FROM ARCHITECT FOR MEASUREMENTS THAT ARE NOT INDICATED.

DATE	ISSUE
XX/XX/14	BID ISSUE

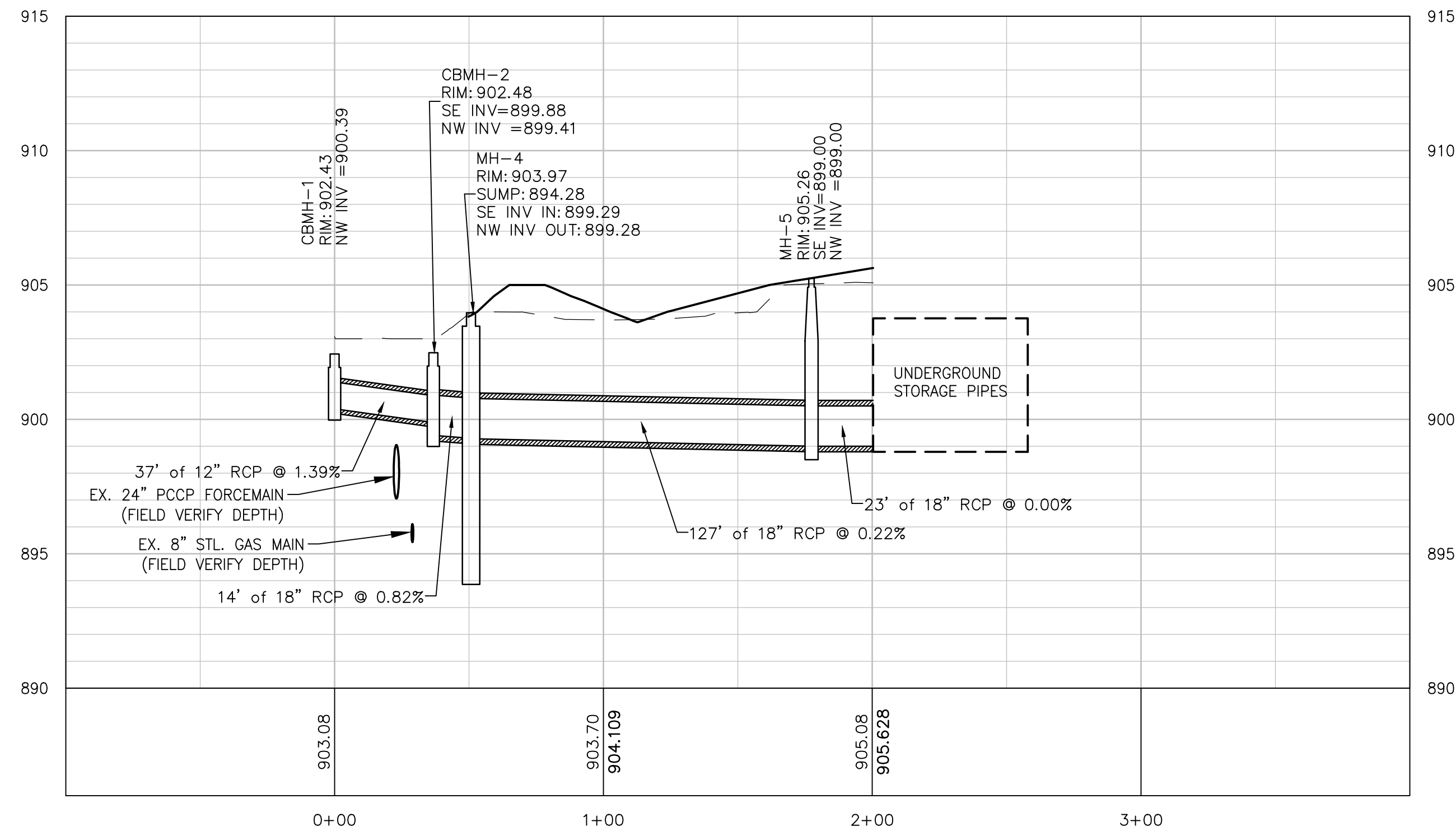
REVISIONS		
NO.	DATE	ISSUE

**STORM SEWER  
 PLAN**

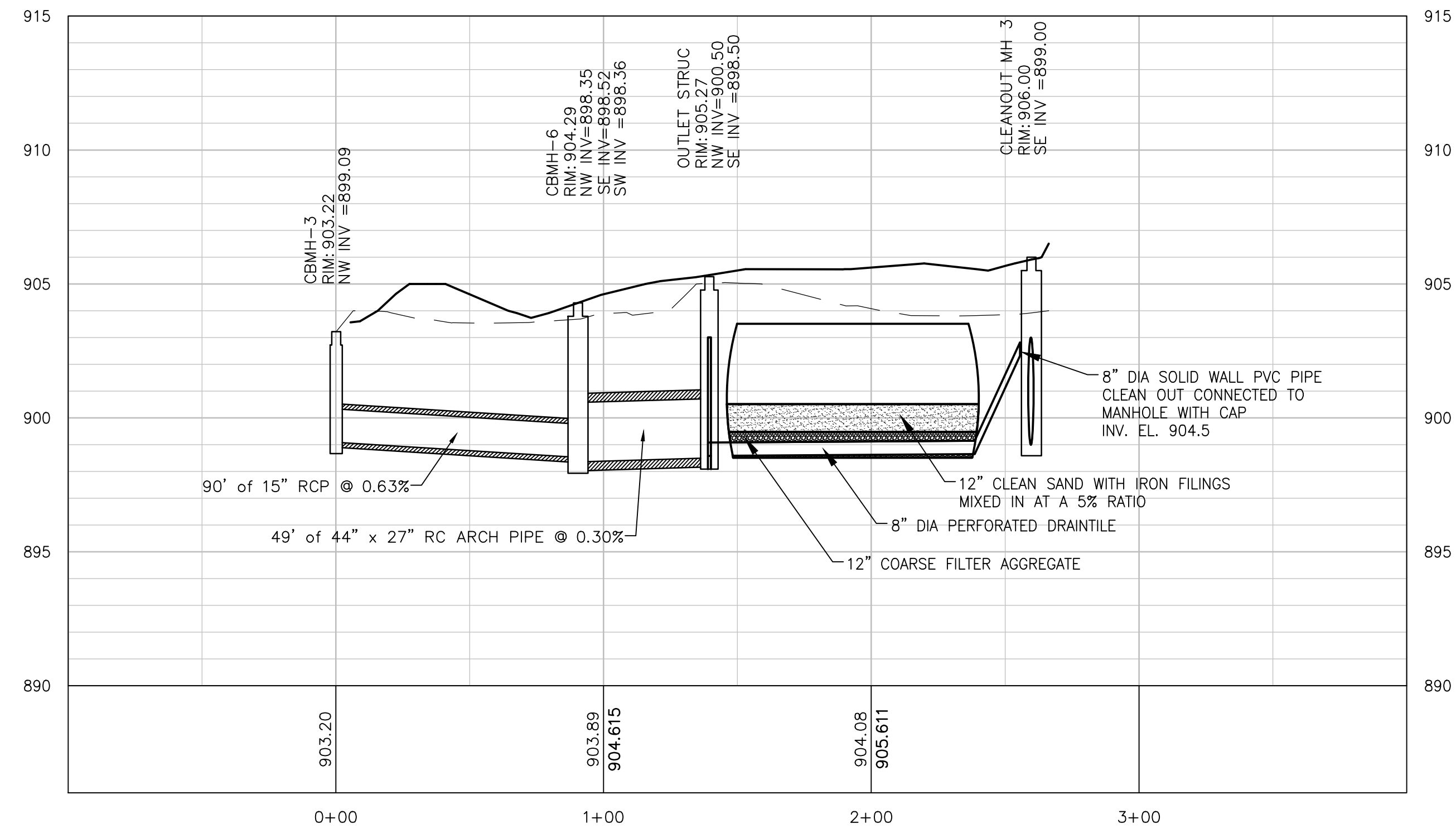
PROJECT #: 0185-5097  
 DRAWN BY: MJS  
 CHECKED BY: CJM  
 DRAWING NO: C5.0



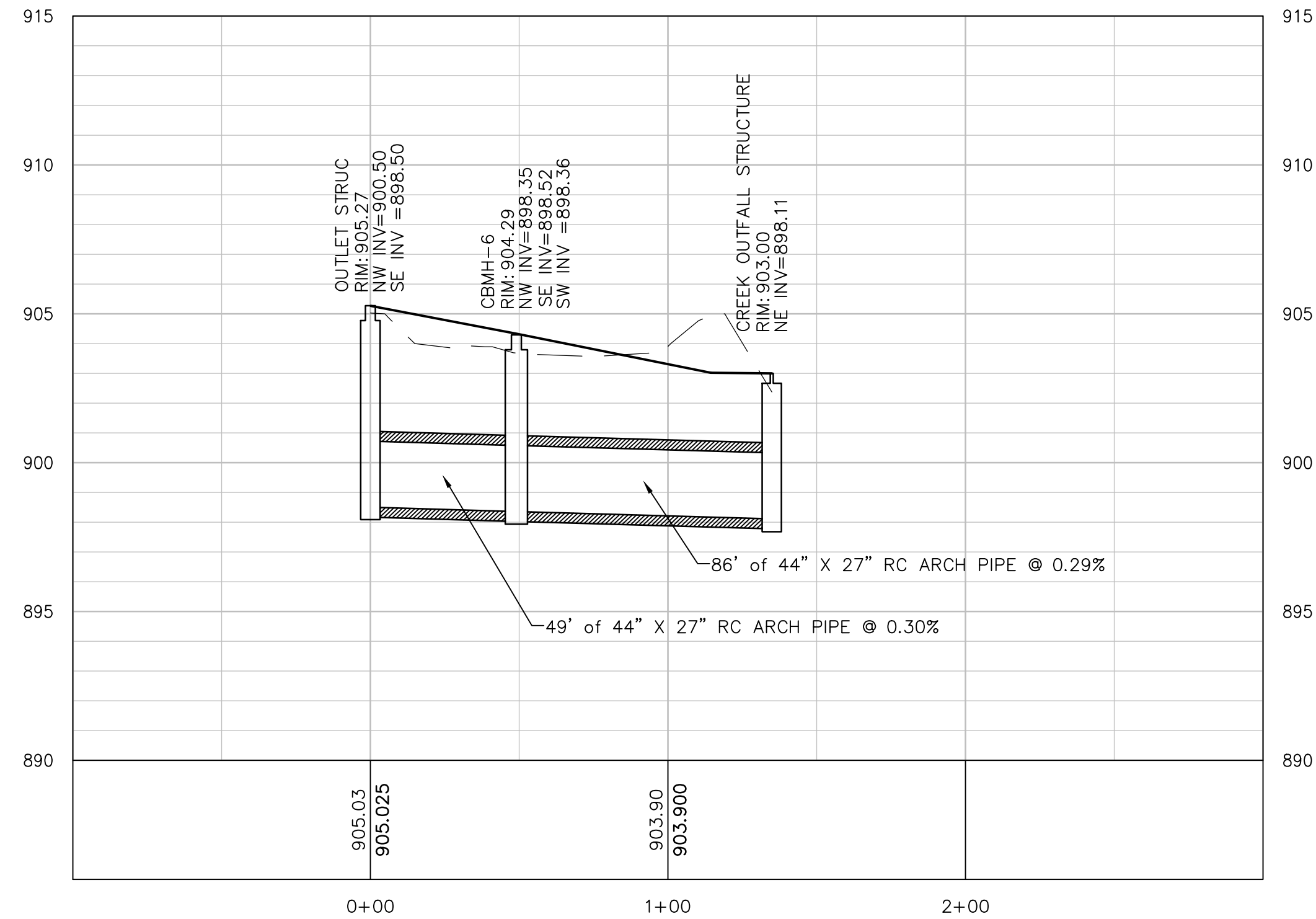
### CBMH 1 TO MH 5



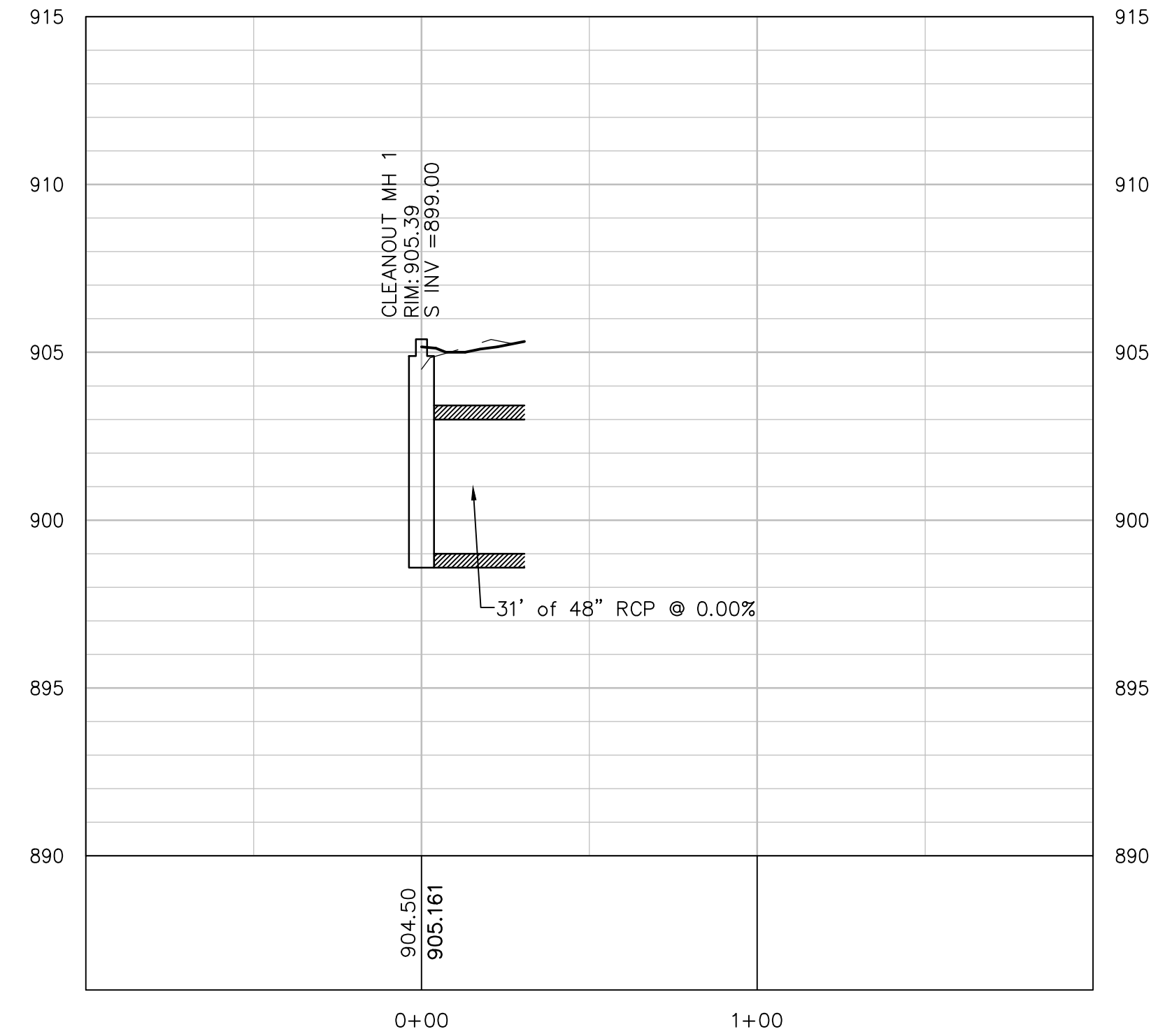
### CBMH 3 TO CBMH 6 & CLEANOUT MH 3 TO CBMH 6



### OUTLET STRUCTURE TO CREEK OUTFALL STRUCTURE



### CLEANOUT MH 1



HART HOWERTON

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and I am a duly licensed Engineer under the laws of the State of Minnesota.  
 REGISTERED PROFESSIONAL ENGINEER - MEE - AN  
 License No: 43000014  
 Date: 08/14/14

**COTTAGEVILLE PARK**  
**PHASE 1**  
 Hopkins, Minnesota  
 Minnehaha Creek Watershed District

SCALE: AS SHOWN  
 NOTE: DIMENSIONS ARE IN FEET UNLESS OTHERWISE NOTED.  
 SCALE DRAWINGS USE FIGURED DIMENSIONS.  
 DIMENSIONS FOR BLOCK LETTERS ARE FROM THE  
 ARCHITECT FOR MEASUREMENTS THAT ARE  
 NOT INDICATED.

DATE	ISSUE
XX/XX/14	BID ISSUE

REVISIONS

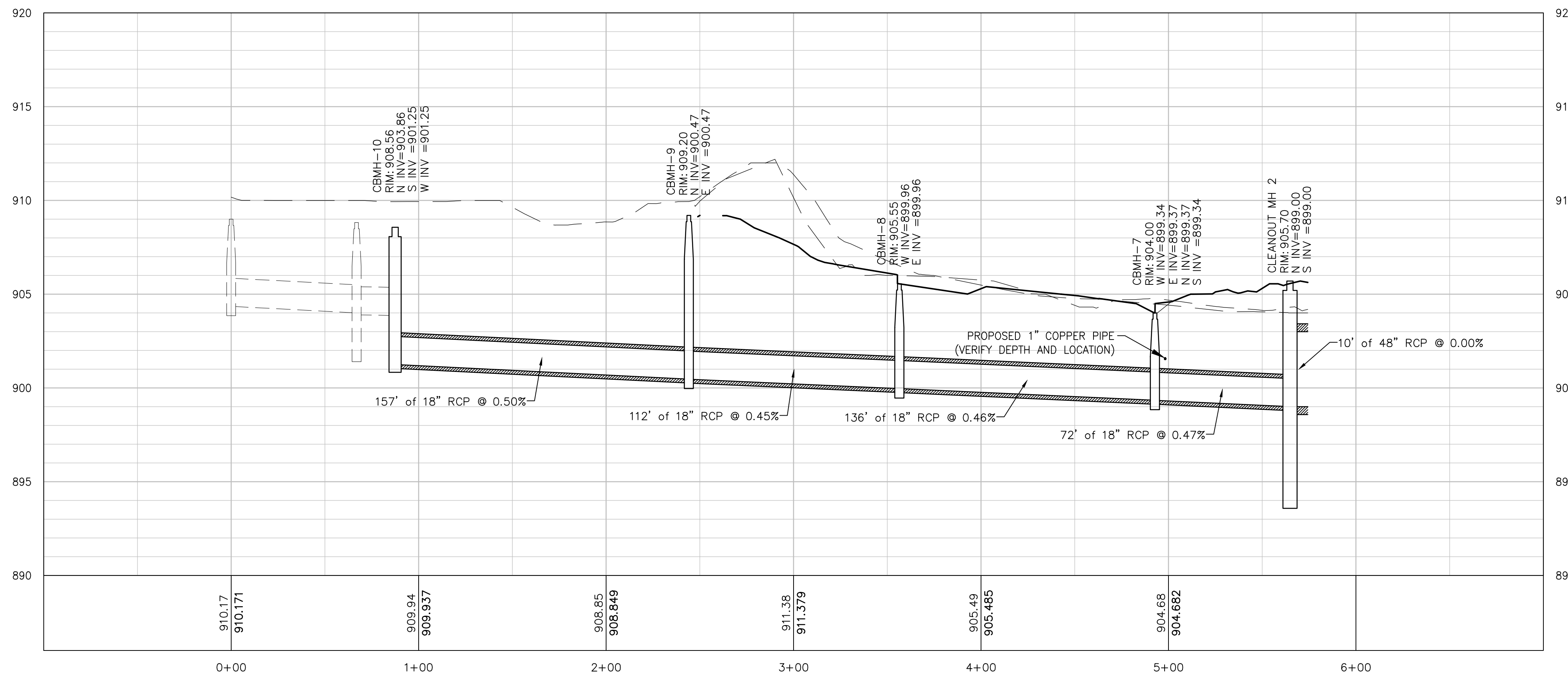
NO	DATE	ISSUE

DRAWING TITLE:  
**STORM SEWER PROFILES**

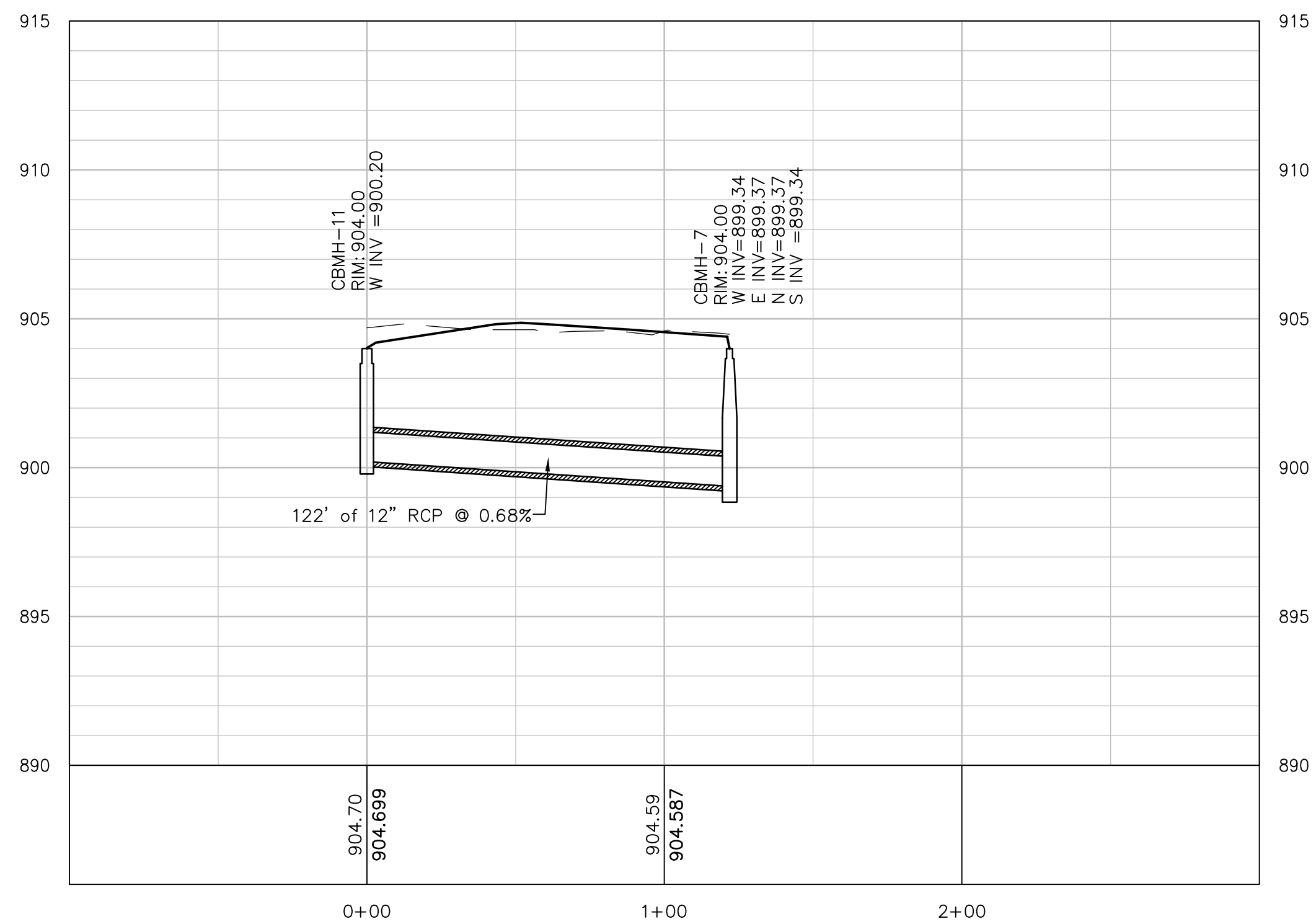
PROJECT #: 0185-5097  
 DRAWN BY: MJS  
 CHECKED BY: CJM

DRAWING NO:  
**C5.1**

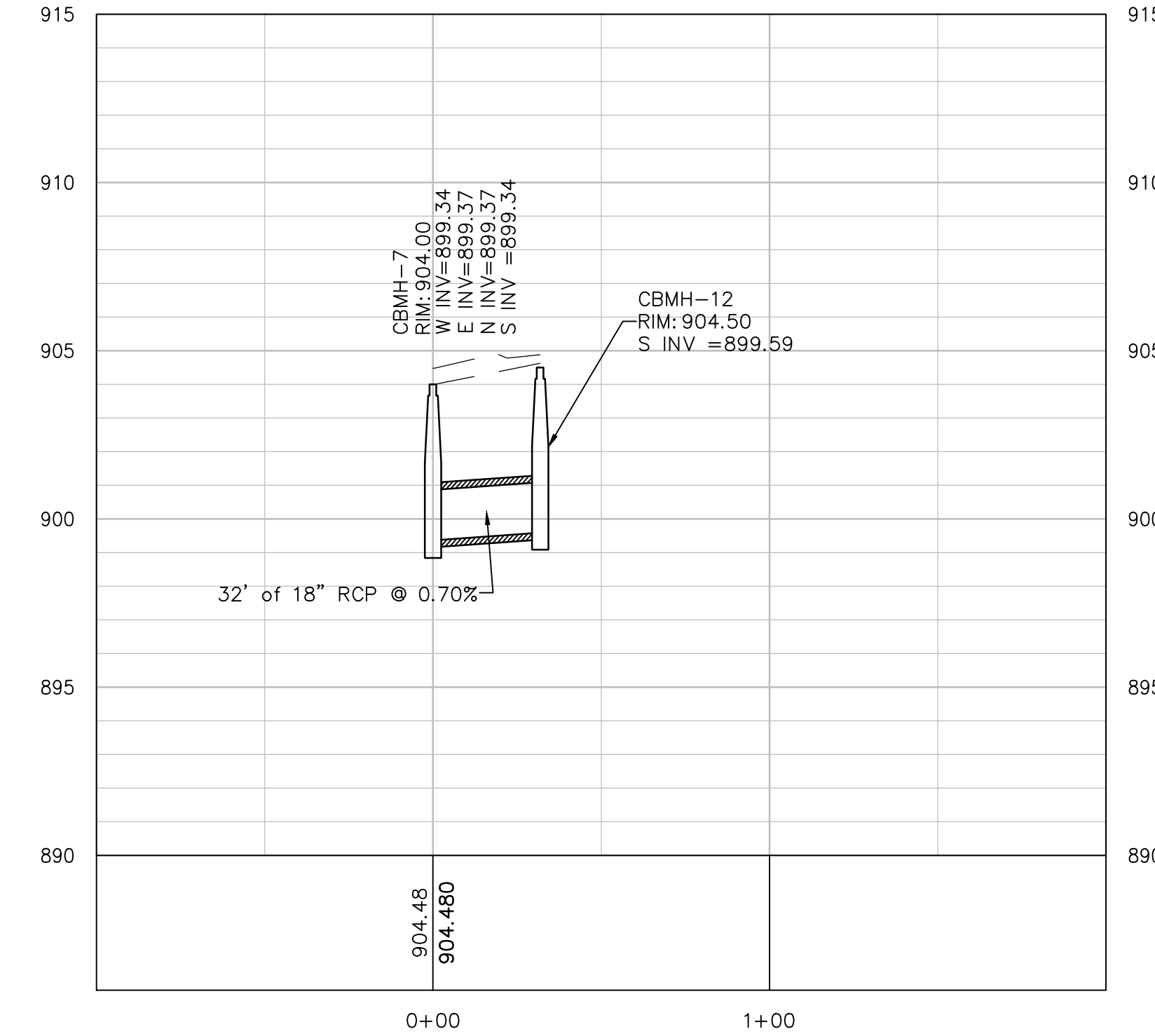
## CBMH 10 TO CLEANOUT MH 2



## CBMH 11 TO CBMH 7



## CBMH 12 TO CBMH 7



HART HOWERTON

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and I am a duly licensed Engineer under the laws of the State of Minnesota.

CHRISTOPHER MEE-AN  
License No: 43000014  
Date: 00/00/14

## COTTAGEVILLE PARK PHASE 1

Hopkins, Minnesota  
Minnehaha Creek Watershed District

SCALE: AS SHOWN  
NOTE: THIS DRAWING IS 24" X 36" IN SIZE.  
SCALE DRAWINGS USE FIGURED DIMENSIONS.  
TRAFFIC MARKS SHALL BE PERFORMED BY THE  
ARCHITECT FOR MEASUREMENTS THAT ARE  
NOT INDICATED.

DATE	ISSUE
XX/XX/14	BID ISSUE

### REVISIONS

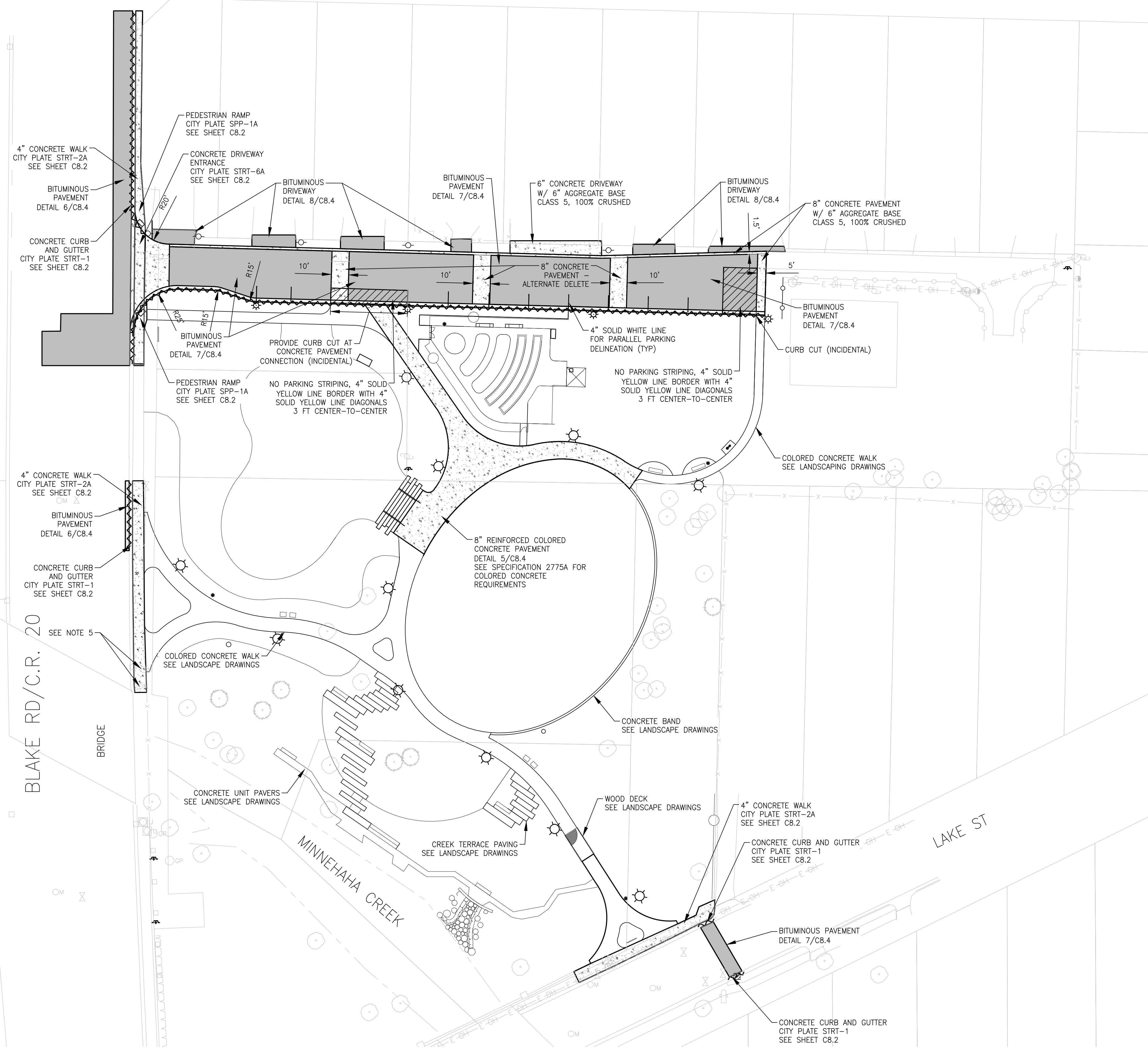
NO	DATE	ISSUE

## DRAWING TITLE: STORM SEWER PROFILES

PROJECT #: 0185-5097  
DRAWN BY: MJS  
CHECKED BY: CJM

DRAWING NO:

# C5.2



- PAVING NOTES:
1. PROVIDE CONTROL JOINTS FOR 4" CONCRETE SIDEWALK AT 6' O.C. MAX.
  2. PROVIDE CONTROL JOINTS FOR REINFORCED CONCRETE PAVEMENT AT 10' O.C. MAX.
  3. PROVIDE TWO #4 REINFORCING RODS IN CURB AT ALL TRENCHES. RODS SHALL BE 20 FEET IN LENGTH AND BE PLACED IN THE LOWER PORTION OF THE CURB.
  4. PROVIDE TWO #4 REINFORCING RODS IN CURB AT ALL CATCH BASINS. RODS SHALL BE NO LESS THAN 10 FEET IN LENGTH AND BE PLACED IN THE LOWER PORTION OF THE CURB.
  5. PROVIDE DOWEL BARS FOR STRUCTURES IN CONCRETE PAVEMENT PER CITY PLATE STRT-16.
  6. PROVIDE STRIPING AND PAVEMENT MARKINGS ON LAKE ST AND BLAKE RD AS REQUIRED TO MATCH EXISTING.

COTTAGEVILLE PARK  
PHASE 1

Hopkins, Minnesota  
Minnehaha Creek Watershed District

SCALE: AS SHOWN  
NOTE: DIMENSIONS ARE IN FEET UNLESS OTHERWISE NOTED. DIMENSIONS IN PARENTHESIS ARE FOR INFORMATION ONLY. DIMENSIONS IN SQUARE BRACKETS ARE FOR MEASUREMENTS THAT ARE NOT INDICATED.

DATE	ISSUE
XX/XX/14	BID ISSUE

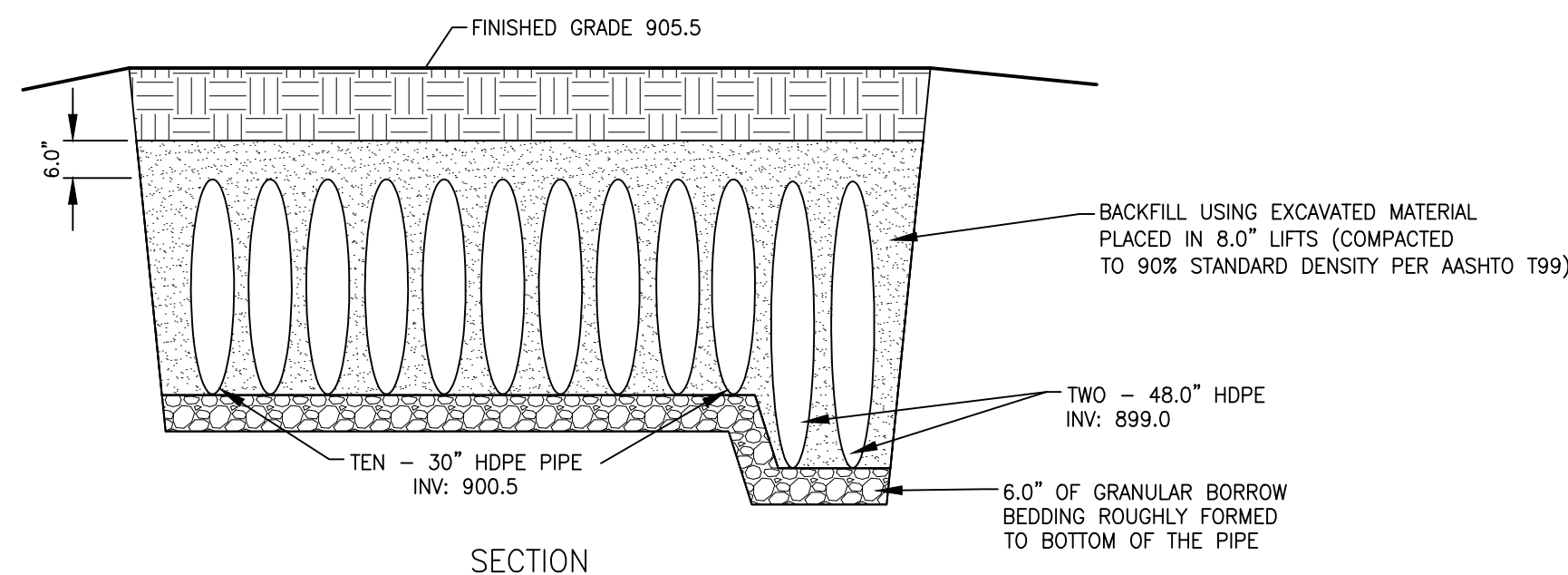
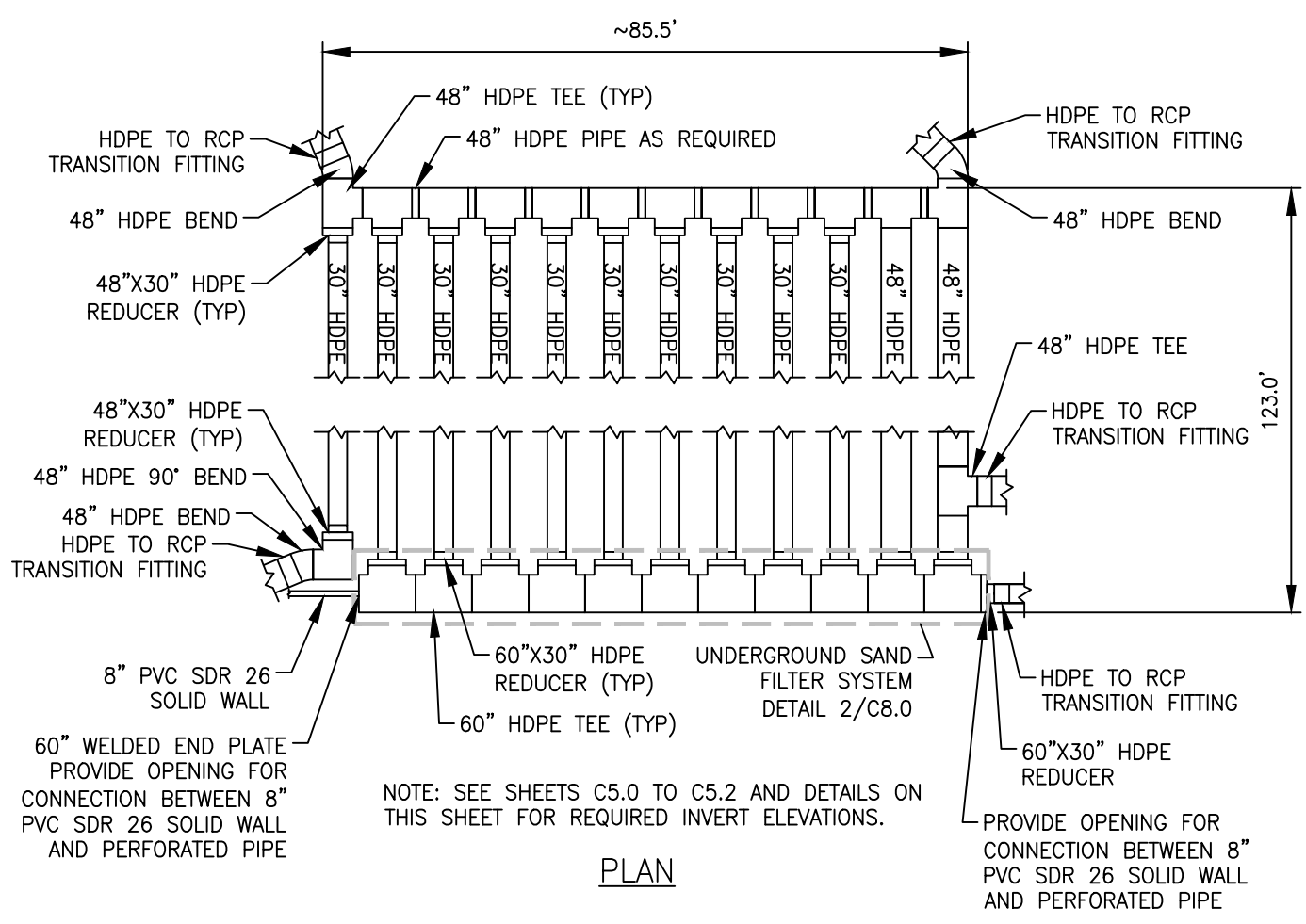
REVISIONS

NO.	DATE	ISSUE

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**PAVING PLAN**

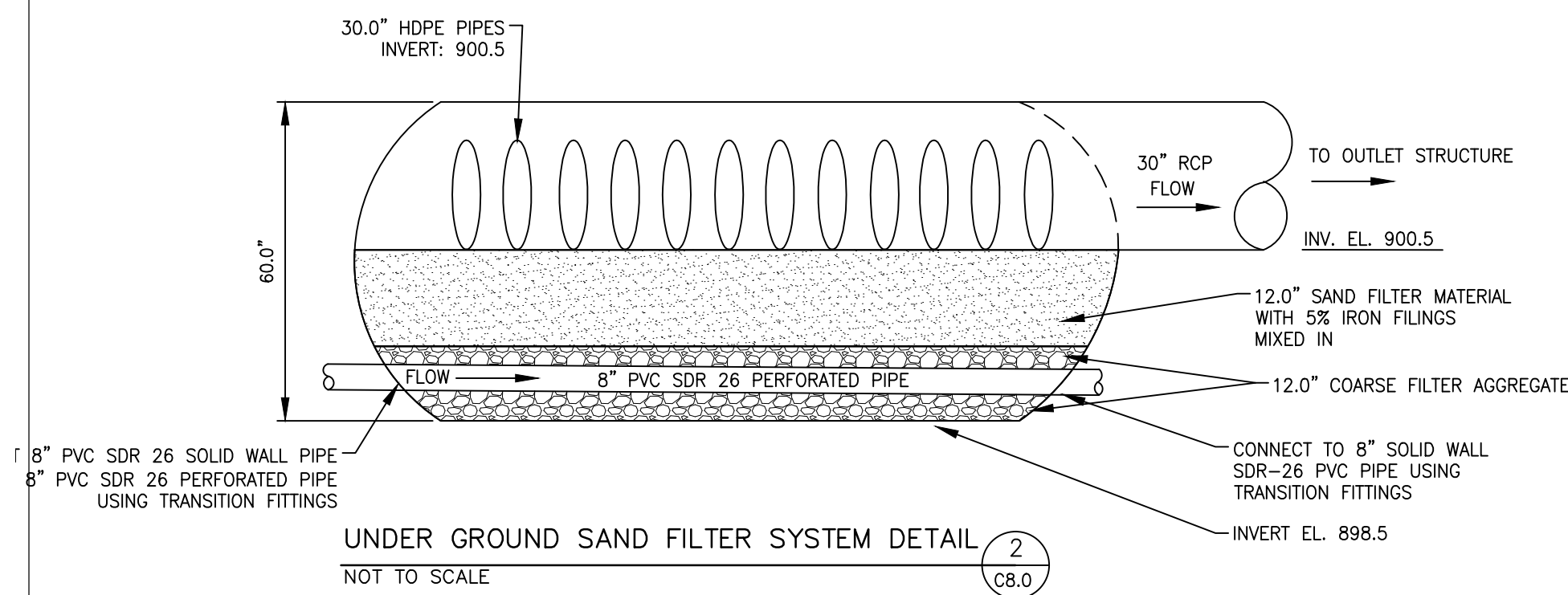
PROJECT #: 0185-5097  
DRAWN BY: MJS  
CHECKED BY: CJM

DRAWING NO:  
**C6.0**



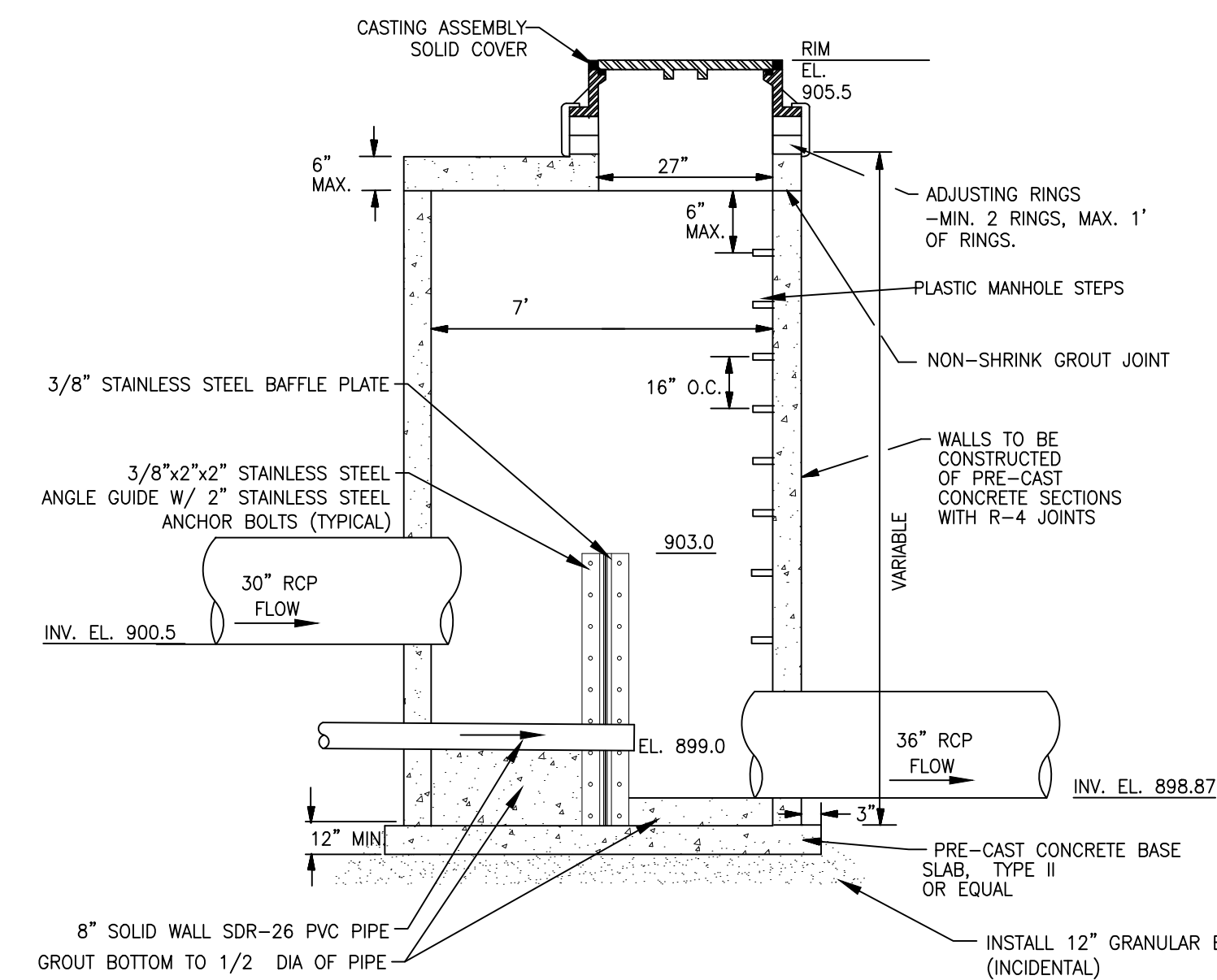
UNDERGROUND STORAGE UNIT DETAIL  
NOT TO SCALE

1  
C8.0



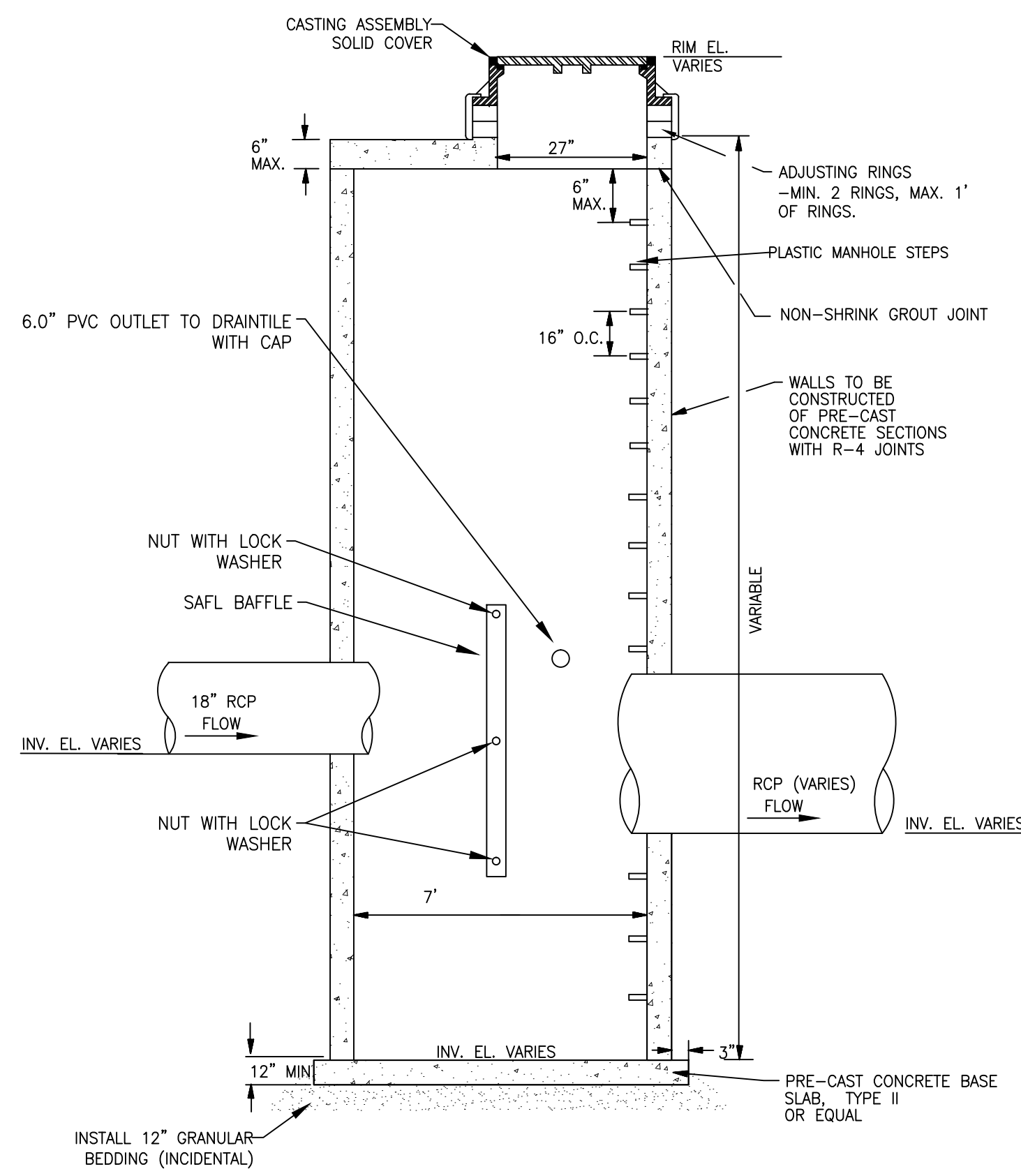
UNDER GROUND SAND FILTER SYSTEM DETAIL  
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2  
C8.0



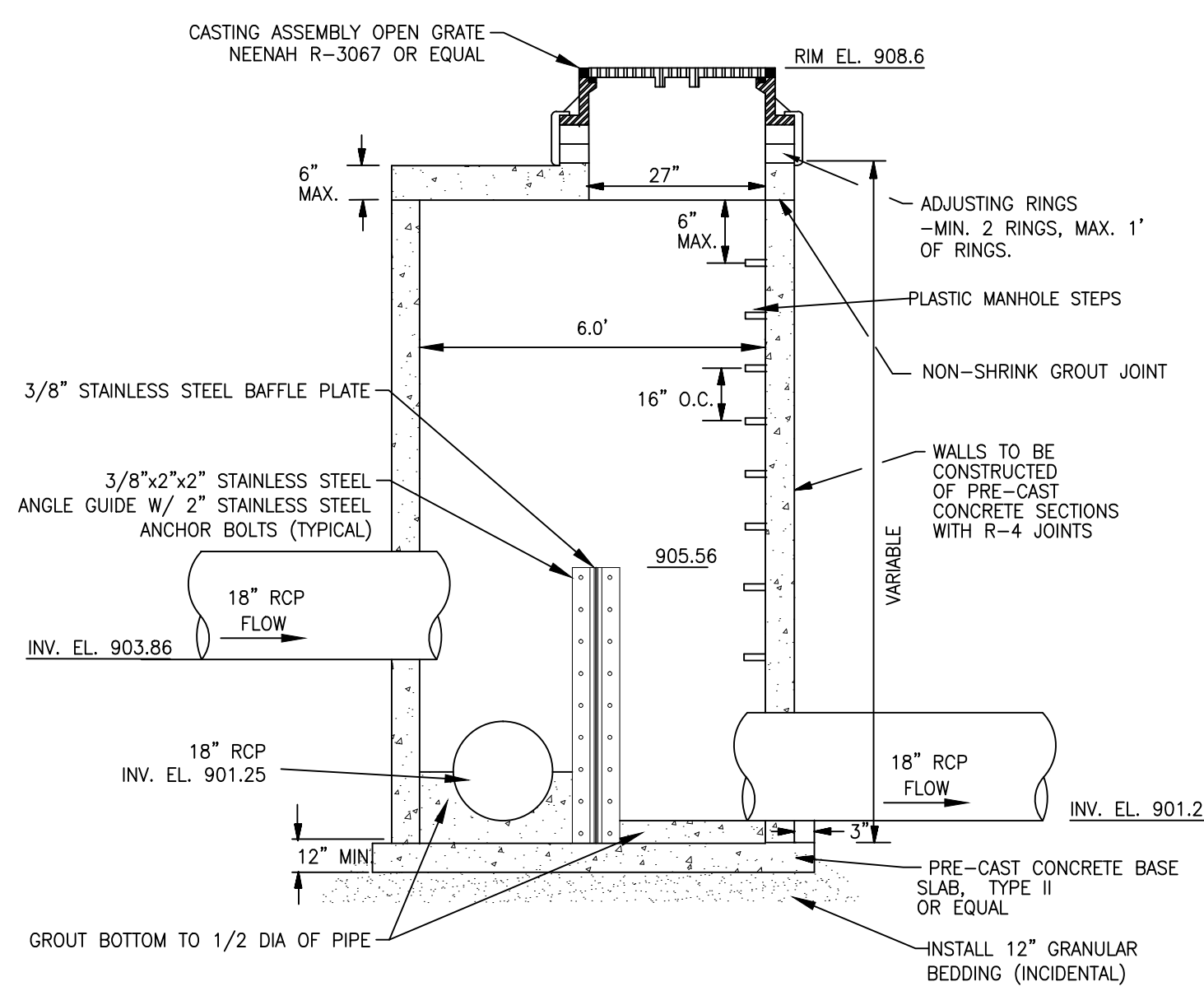
UNDERGROUND STORAGE OUTLET STRUCTURE  
NOT TO SCALE

3  
C8.0



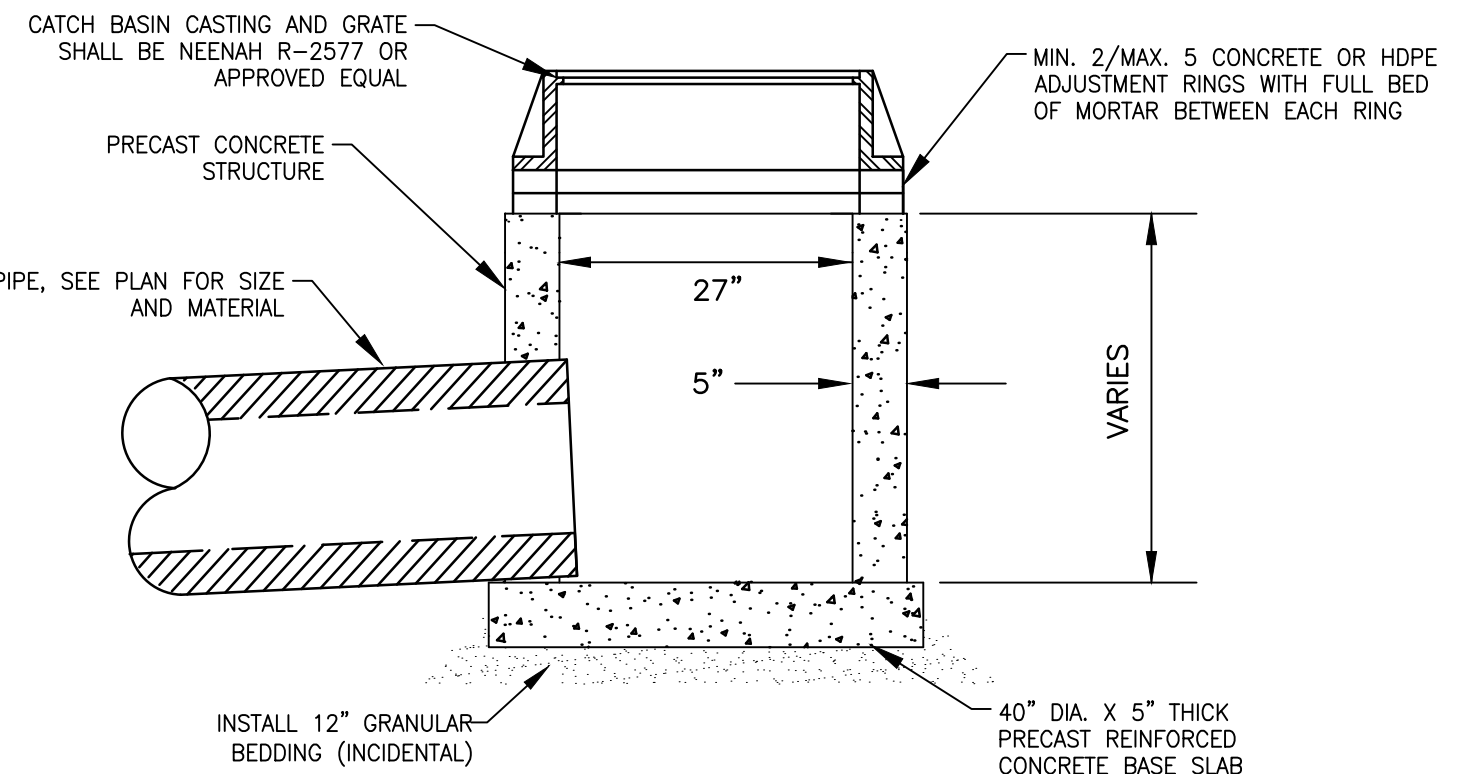
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4  
C8.0



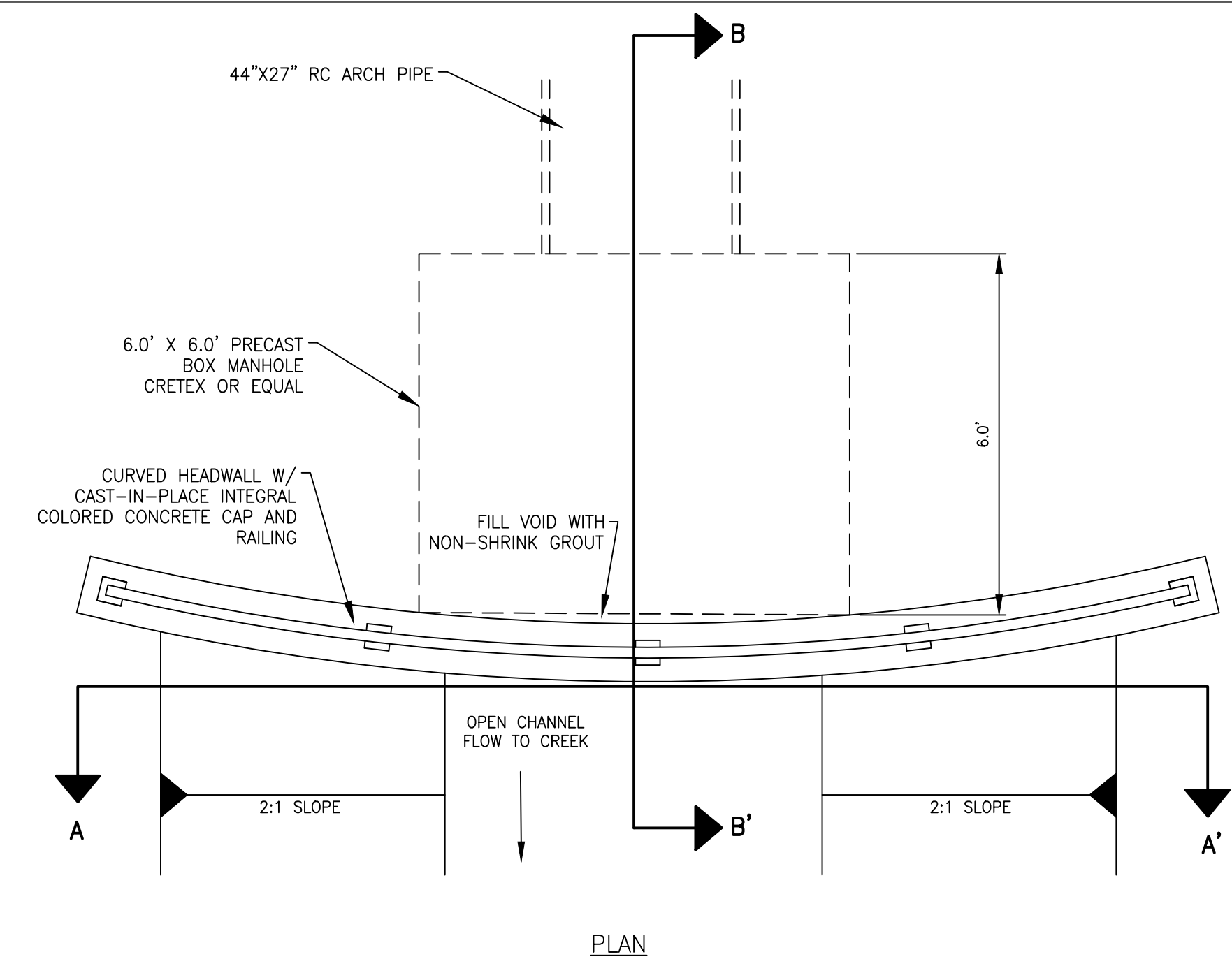
CBMH-10 DETAIL  
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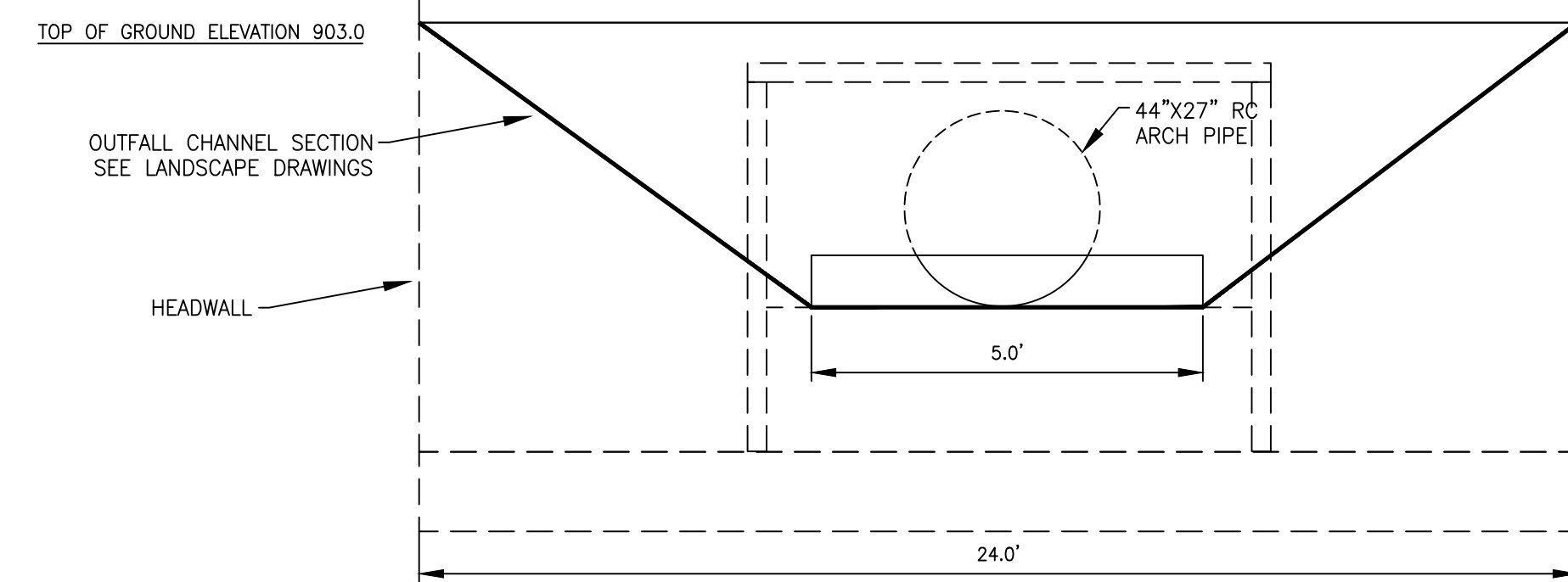


27" DIAMETER PRECAST CATCHBASIN  
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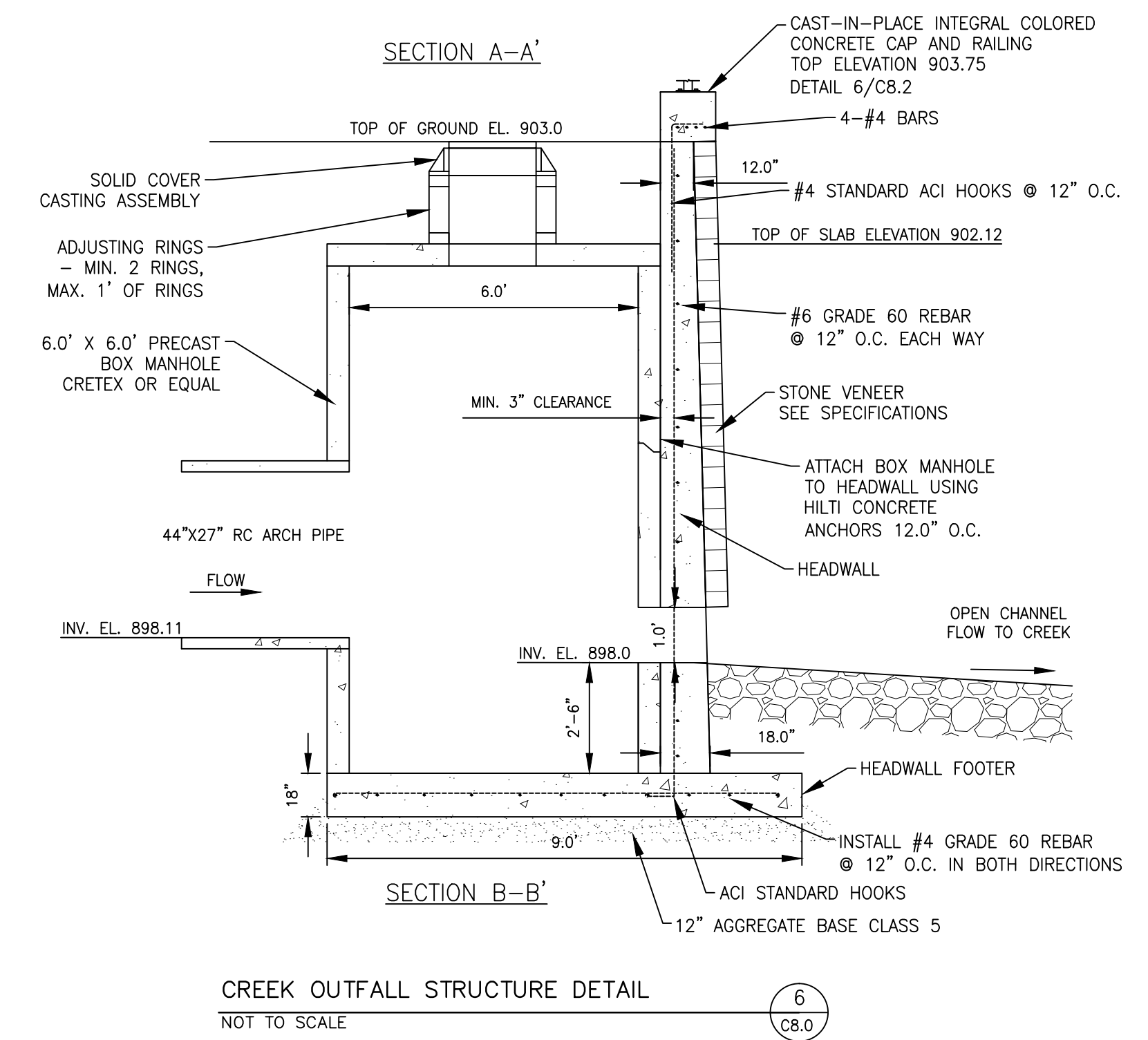
7  
C8.0



NOTE:  
1. CONSTRUCT OUTFALL FROM PRECAST 6'x6' BOX MANHOLE SECTIONS



SECTION A-A'

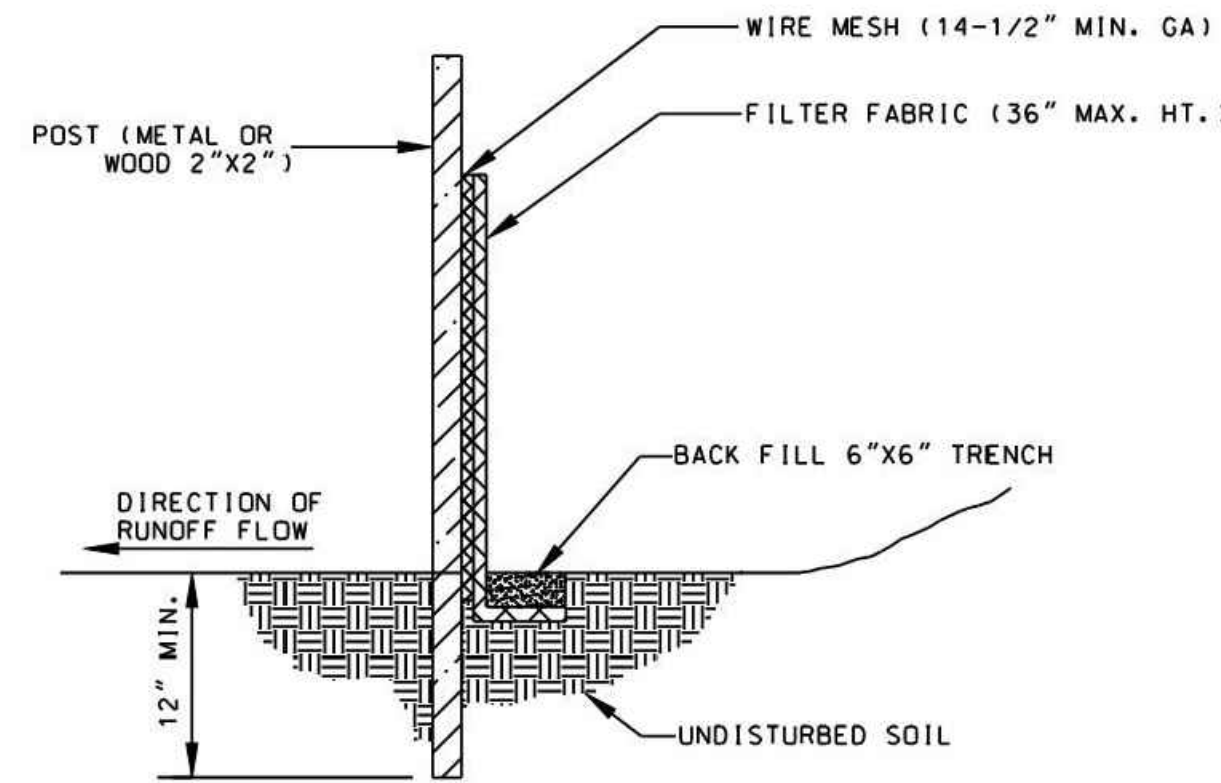


CREEK OUTFALL STRUCTURE DETAIL  
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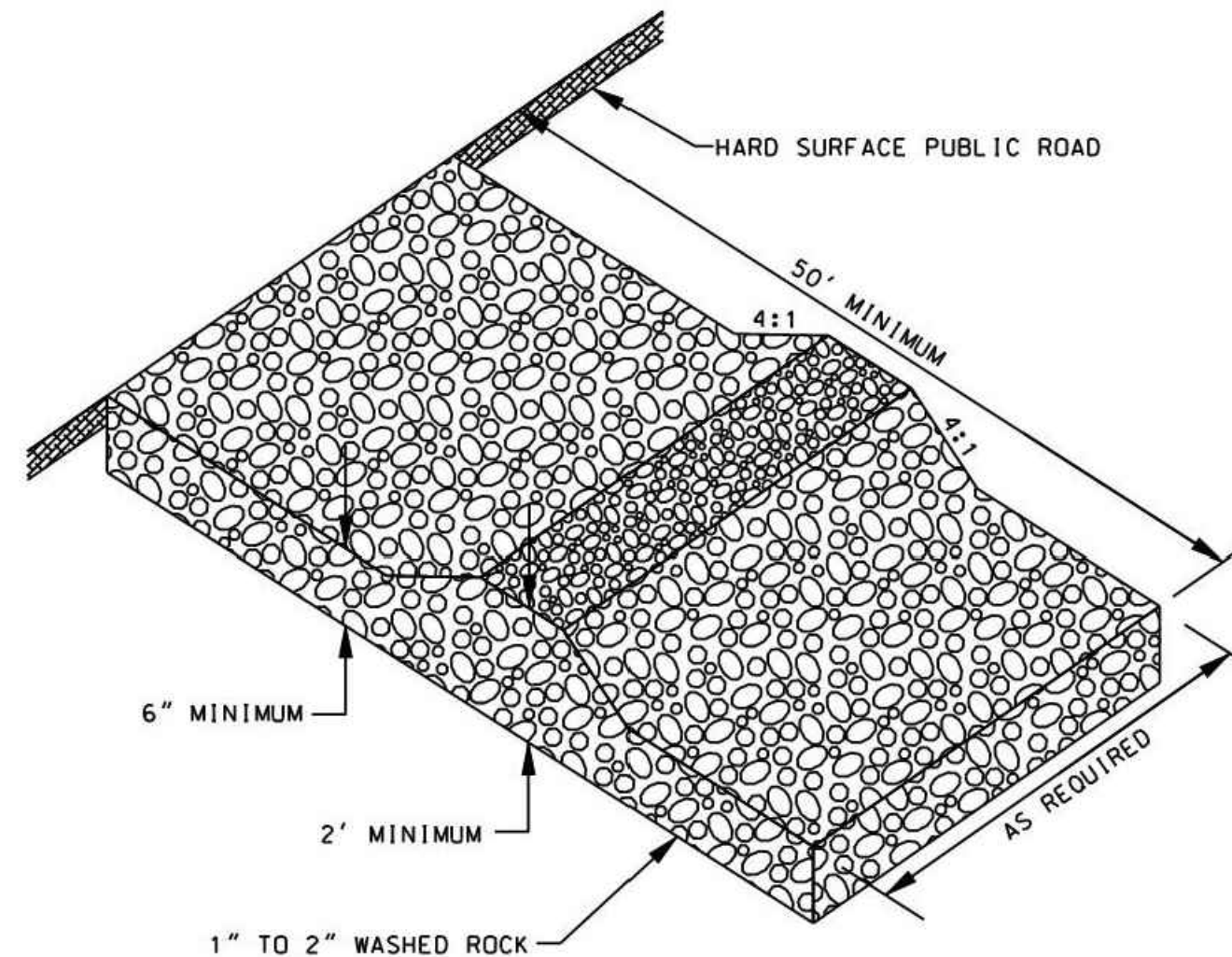
6  
C8.0

**NOTES:**

- DIG A 6"x6" TRENCH ALONG THE INTENDED FENCE LINE.
- DRIVE ALL POSTS INTO THE GROUND AT THE DOWNHILL SIDE OF THE TRENCH.
- WIRE FENCING PER HENNEPIN COUNTY CONSERVATION DISTRICT EROSION AND SEDIMENT CONTROL MANUAL. WIRE MESH MUST BE A MINIMUM OF 2" INTO THE GROUND AND NO MORE THAN 36" ABOVE THE ORIGINAL GROUND SURFACE.
- LAY OUT SILT FENCE ON THE UPHILL SIDE ALONG THE FENCE LINE, AND BACK FILL.
- WOOD POSTS MAY BE SPACED UP TO 4 FEET APART IF WIRE MESH IS NOT USED TO SUPPORT THE FABRIC. IF WIRE MESH IS USED TO SUPPORT THE FABRIC STEEL POSTS MAY BE SPACED UP TO 8 FEET APART.
- REMOVE SILT FENCE AFTER TURF IS ESTABLISHED.

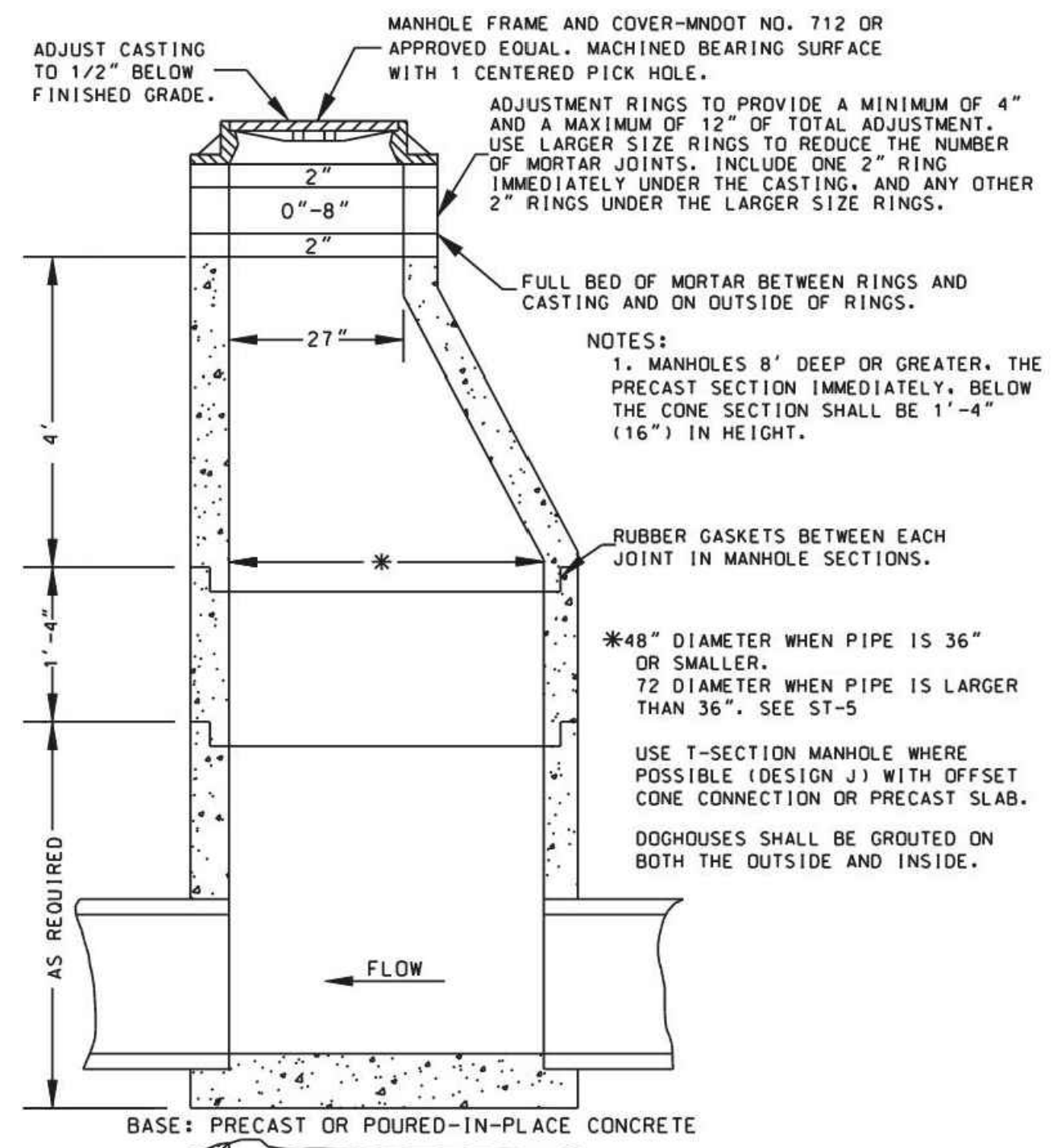


DRAWN BY:	STANDARD DETAILS	REVISED:
APPROV. BY:	SILT FENCE DETAIL CITY OF HOPKINS	9-01 CITY PL. NO. DGN-5



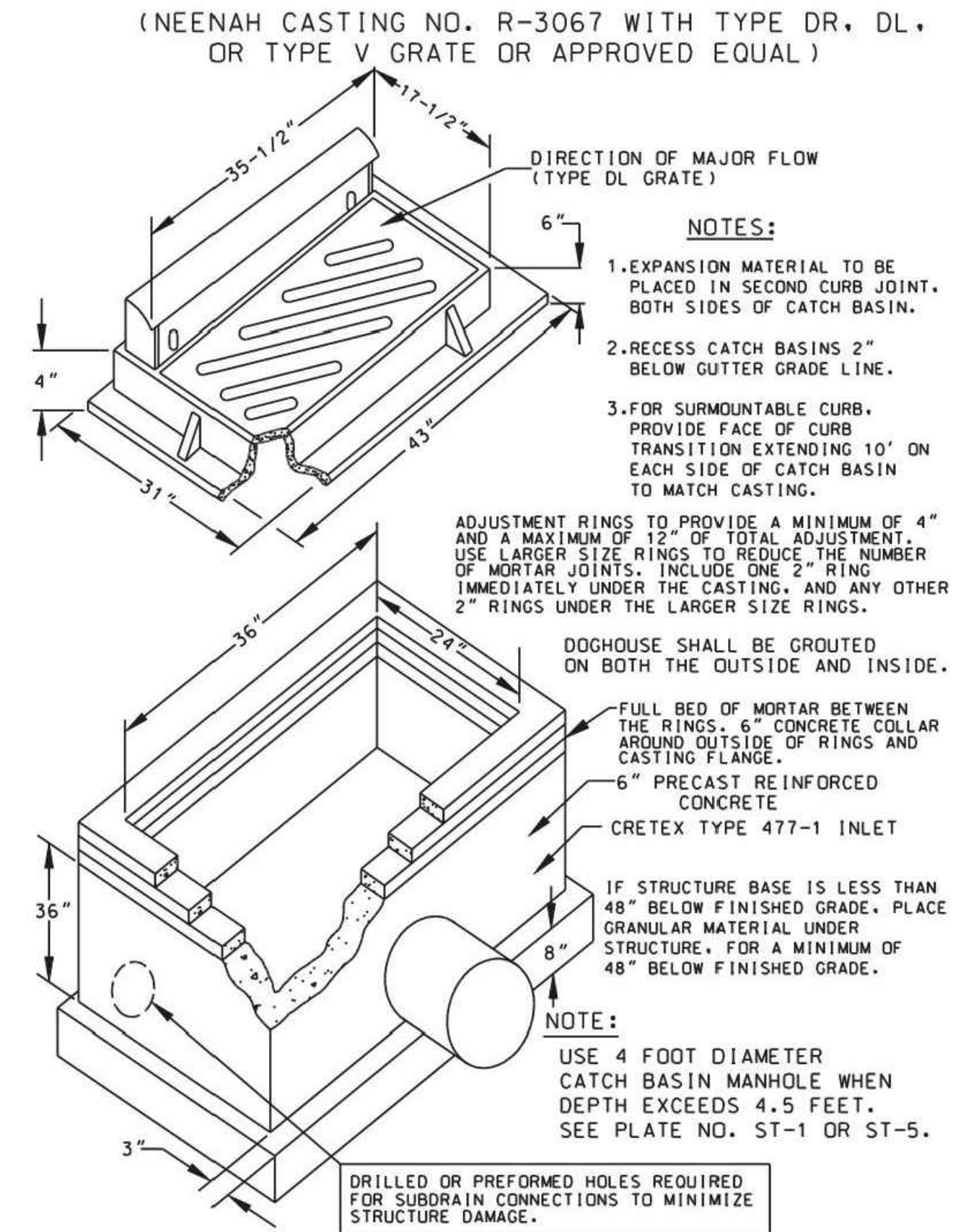
**NOTES:**  
ROCK SIZE SHOULD BE 1" TO 2" IN SIZE SUCH AS MN/DOT CA-1 OR CA-2 COURSE AGGREGATE. (WASHED)  
A GEOTEXTILE FABRIC MAY BE USED UNDER THE ROCK TO PREVENT MIGRATION OF THE UNDERLYING SOIL INTO THE STONE.

DRAWN BY:	STANDARD DETAILS	REVISED:
APPROV. BY:	ROCK ENTRANCE TO CONSTRUCTION SITE CITY OF HOPKINS	9-01 CITY PL. NO. DGN-7

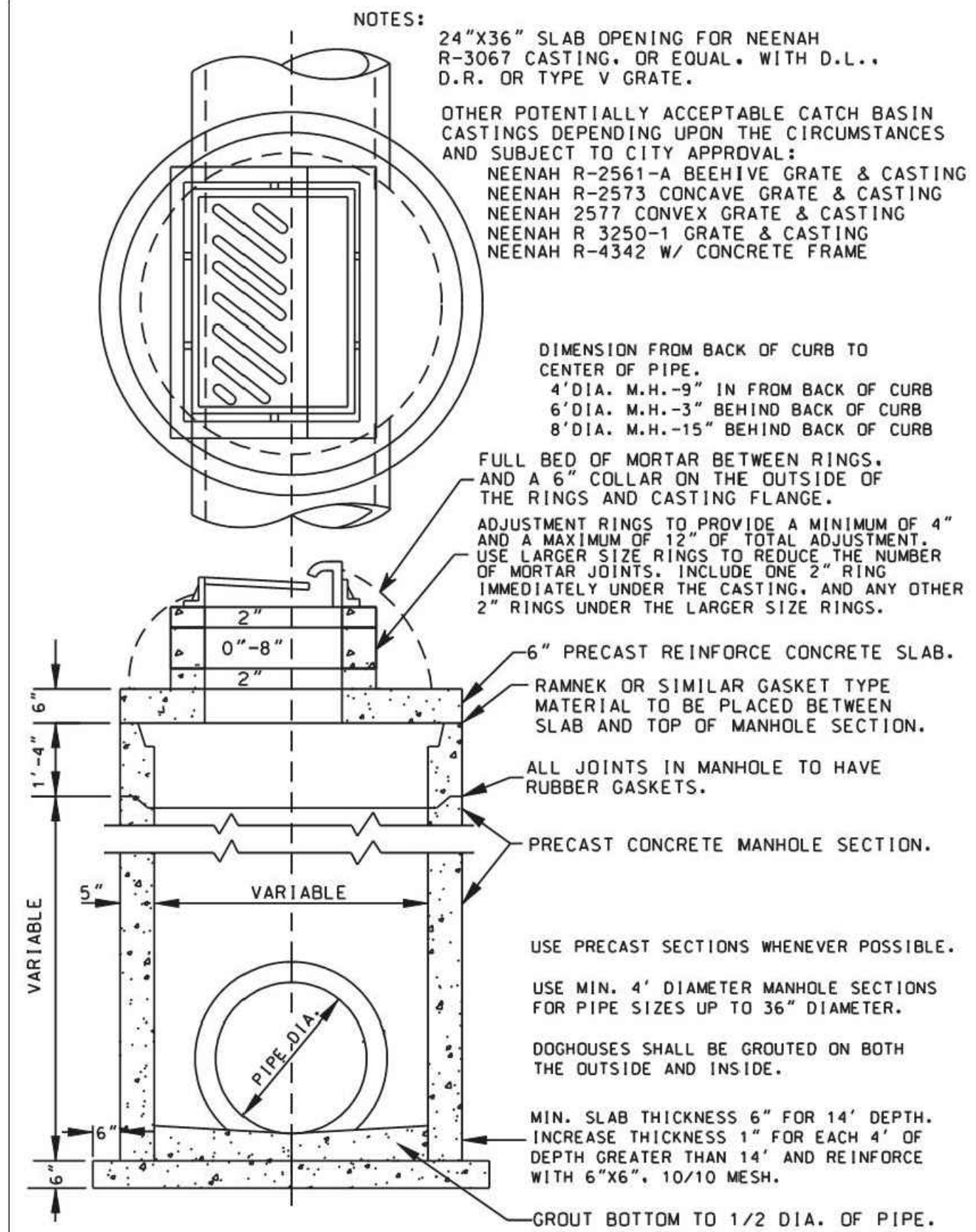


**NOTE:**  
MINIMUM SLAB THICKNESS 6" FOR 14" DEPTH. INCREASE THICKNESS 1" FOR EACH 4" OF DEPTH GREATER THAN 14" AND REINFORCE WITH 6"x6" 10/10 MESH.

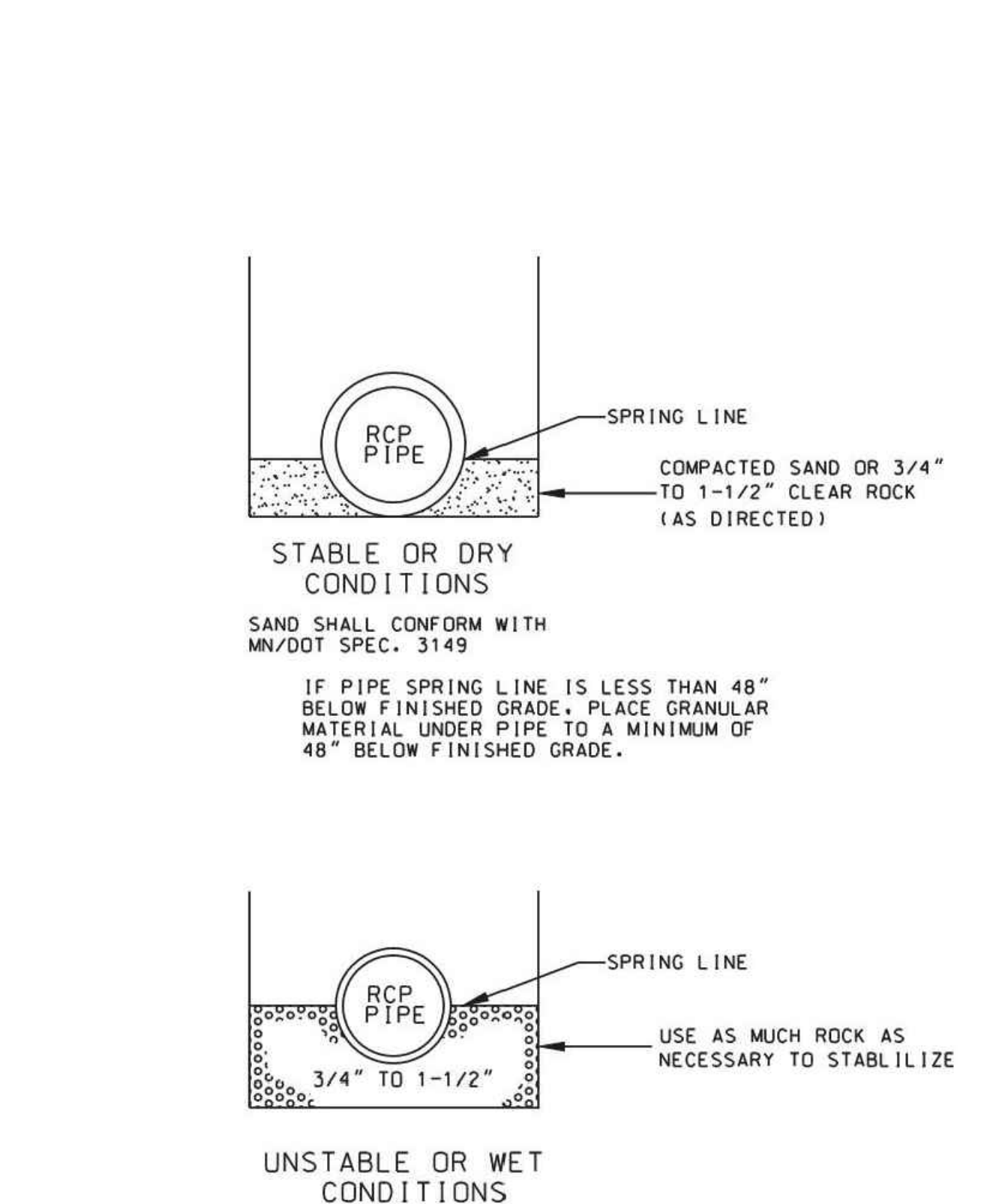
DRAWN BY:	STANDARD DETAILS	REVISED:
APPROV. BY:	STORM SEWER MANHOLE WITH CONE SECTION CITY OF HOPKINS	2-02 CITY PL. NO. ST-1



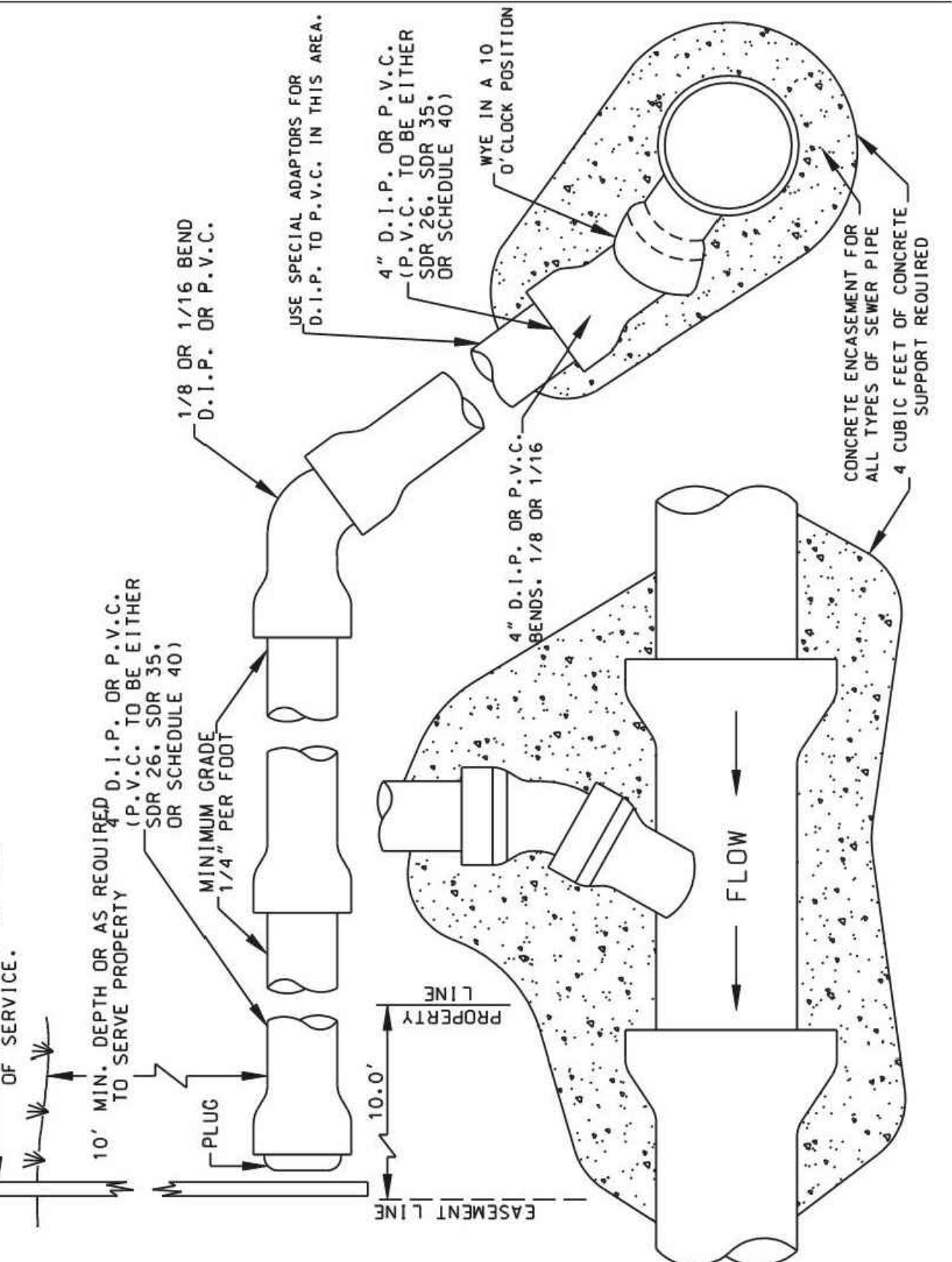
DRAWN BY:	STANDARD DETAILS	REVISED:
APPROV. BY:	CATCH BASIN (MAX. DEPTH 4.5') CITY OF HOPKINS	9-01 CITY PL. NO. ST-2



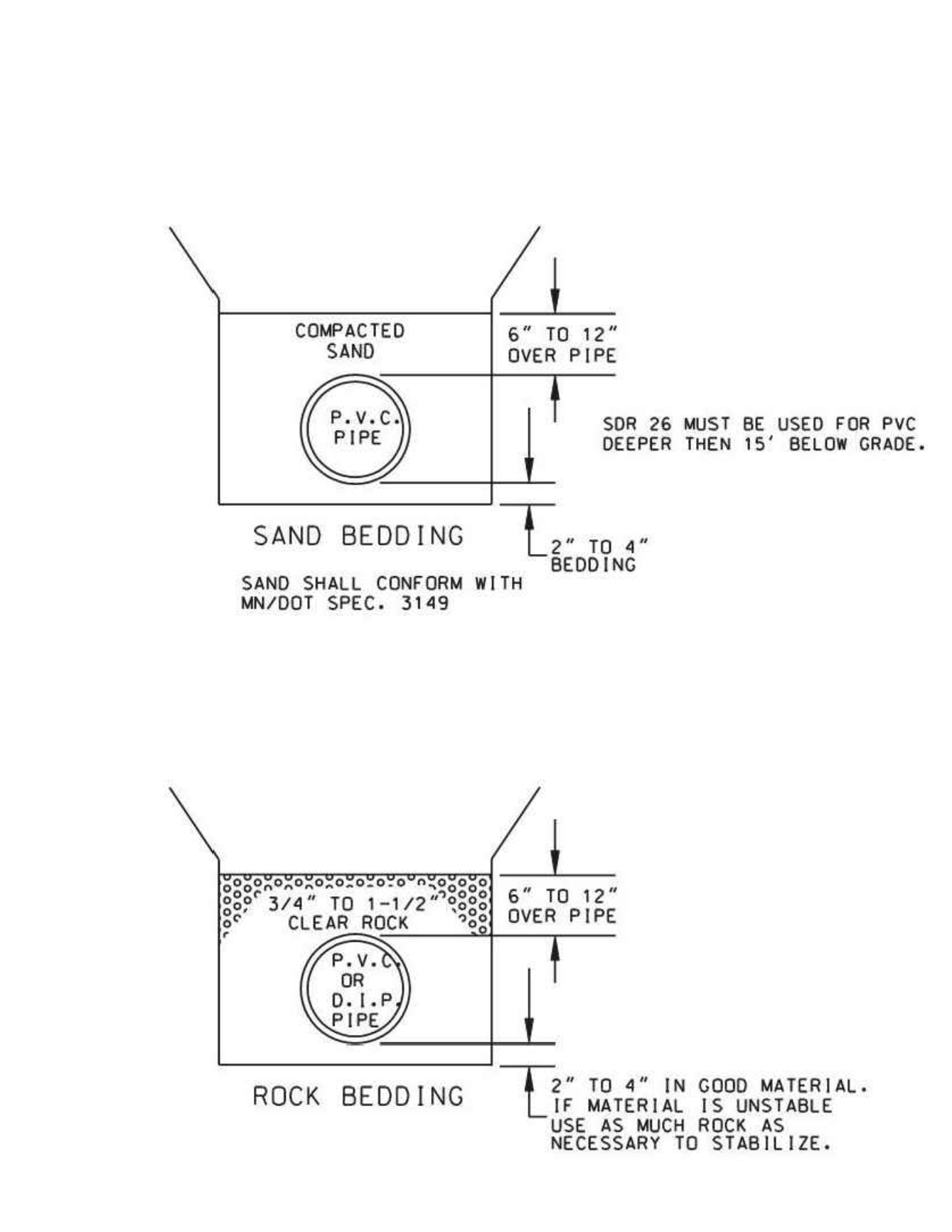
DRAWN BY:	STANDARD DETAILS	REVISED:
APPROV. BY:	PRECAST STORM SEWER CATCH BASIN MANHOLE WITH REINFORCED CONCRETE TOP SLAB CITY OF HOPKINS	2-02 CITY PL. NO. ST-5



DRAWN BY:	STANDARD DETAILS	REVISED:
APPROV. BY:	STORM SEWER BEDDING CITY OF HOPKINS	9-01 CITY PL. NO. ST-6



DRAWN BY:	STANDARD DETAILS	REVISED:
APPROV. BY:	RISER-SERVICE CONNECTION CITY OF HOPKINS	9-01 CITY PL. NO. SS-2

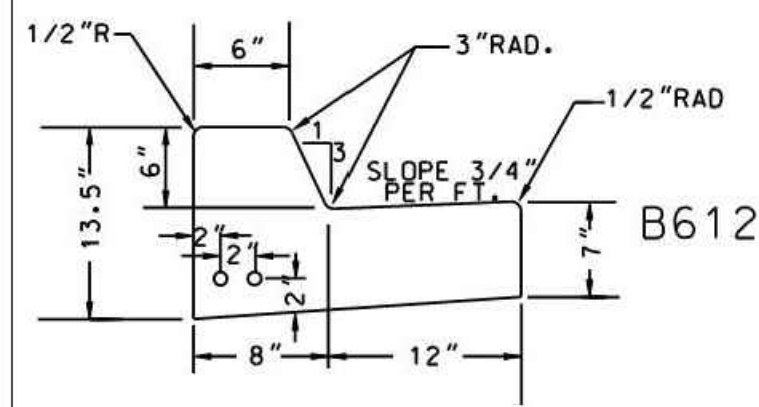


DRAWN BY:	STANDARD DETAILS	REVISED:
APPROV. BY:	SANITARY SEWER BEDDING CITY OF HOPKINS	9-01 CITY PL. NO. SS-5

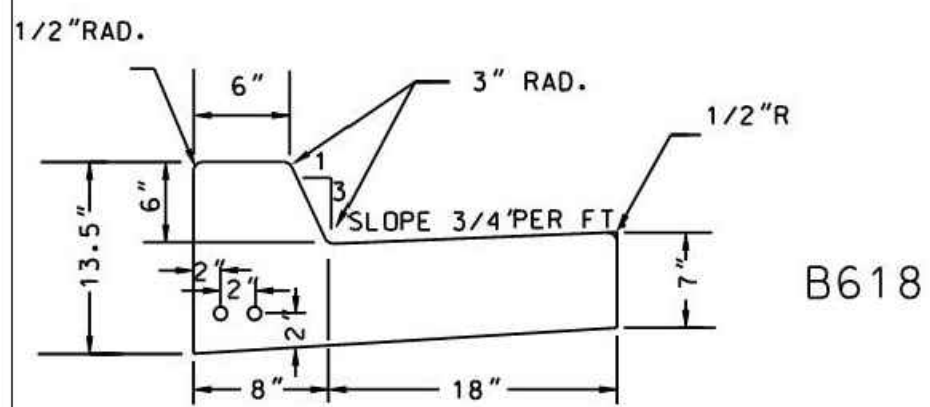
DATE	ISSUE
XX/XX/14	BID ISSUE

REVISIONS		
NO.	DATE	ISSUE

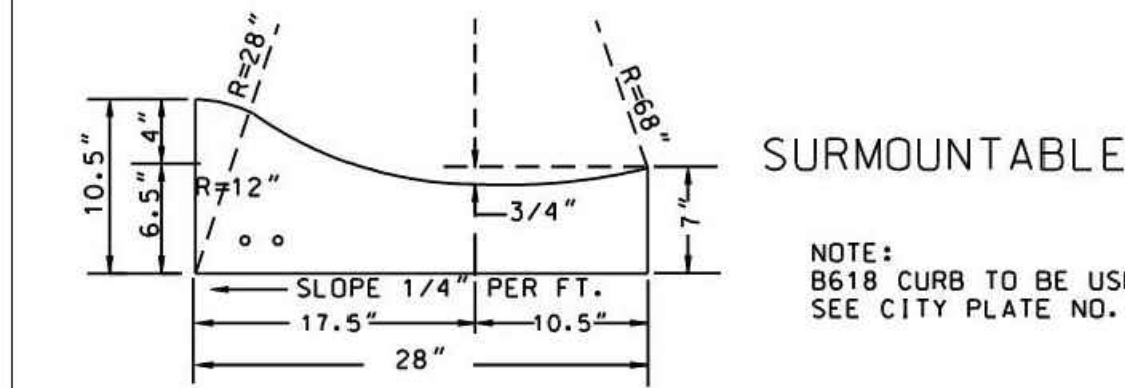




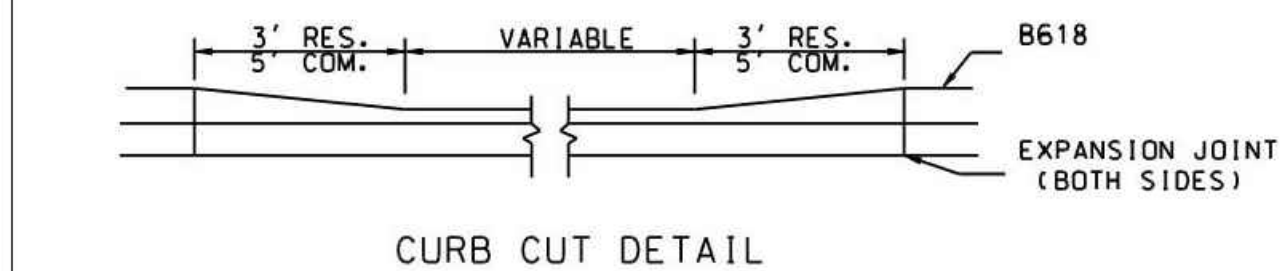
AT ALL TRENCHES 2#4 REINFORCING RODS SHALL BE PLACED IN THE LOWER PORTION OF THE CURB 20 FEET IN LENGTH.  
2#4 REINFORCING RODS AT CATCH BASINS NO LESS THEN 10 FEET IN LENGTH.  
NOTE: CONTROL JOINTS SHALL CONFORM WITH MNDOT SPEC. 2531.3C.



NOTE: B618 CURB TO BE USED AT RADIUS. SEE CITY PLATE NO. STRT-5

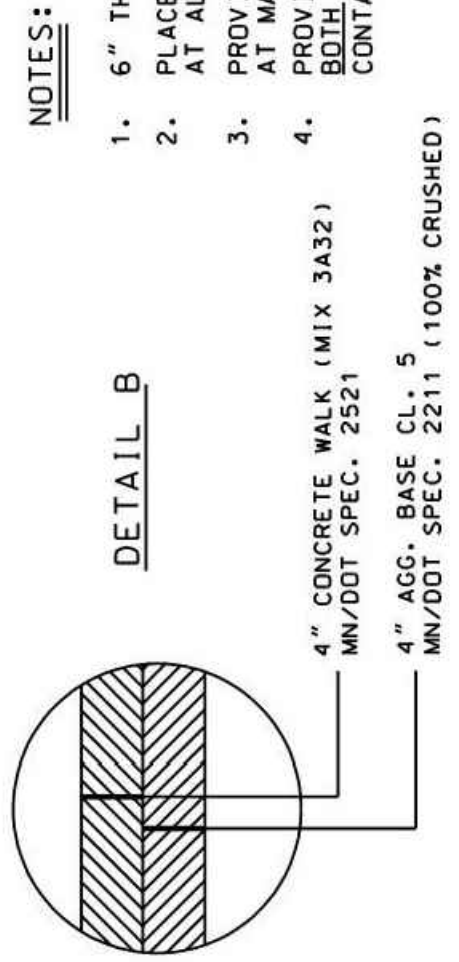
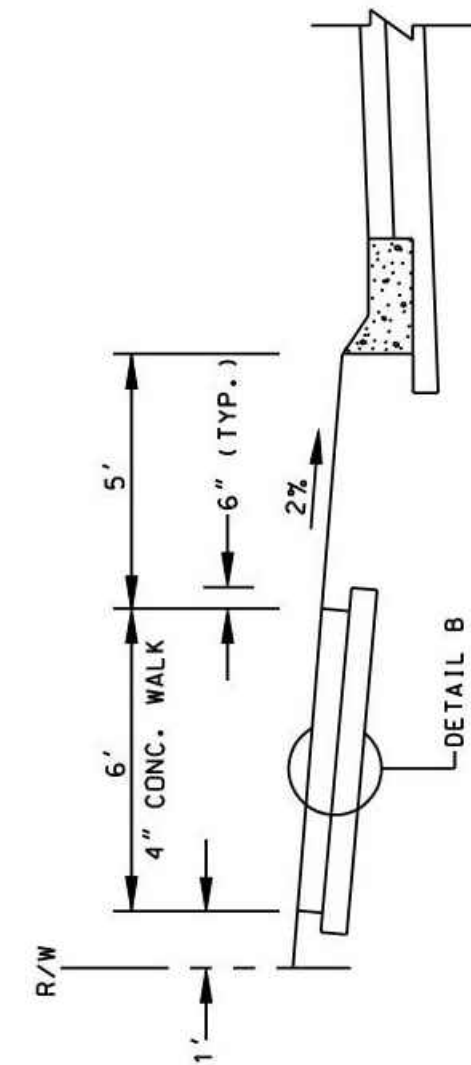


NOTE: B618 CURB TO BE USED AT RADIUS. SEE CITY PLATE NO. STRT-5



CURB CUT DETAIL

DRAWN BY:	STANDARD DETAILS	REVISED:	9-01
APPROV. BY:	STANDARD CURB DETAILS CITY OF HOPKINS	CITY PL. NO.:	STRT-1

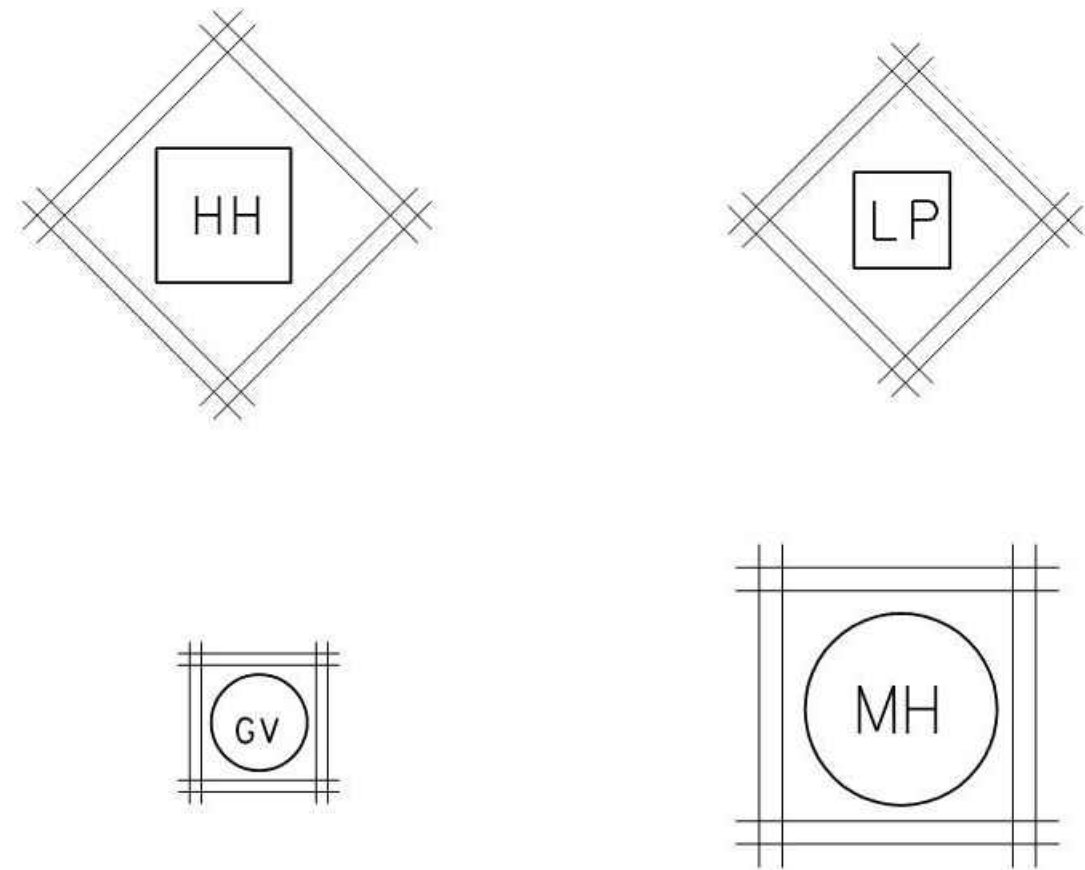


NOTES:  
1. 6" THICK CONCRETE SIDEWALK AT DRIVEWAYS  
2. PLACE PEDESTRIAN CURB RAMPS AT ALL INTERSECTIONS.  
3. PROVIDE EXPANSION JOINT MATERIAL AT MAX. 60 FOOT SPACING.  
4. PROVIDE EXPANSION JOINT MATERIAL ALONG BOTH EDGES OF ALL SIDEWALKS CONTAINED BETWEEN FIXED OBJECTS.  
4" CONCRETE WALK (MIX 3A32) MNDOT SPEC. 2521  
4" AGG. BASE CL. 5 MNDOT SPEC. 2211 (100% CRUSHED)

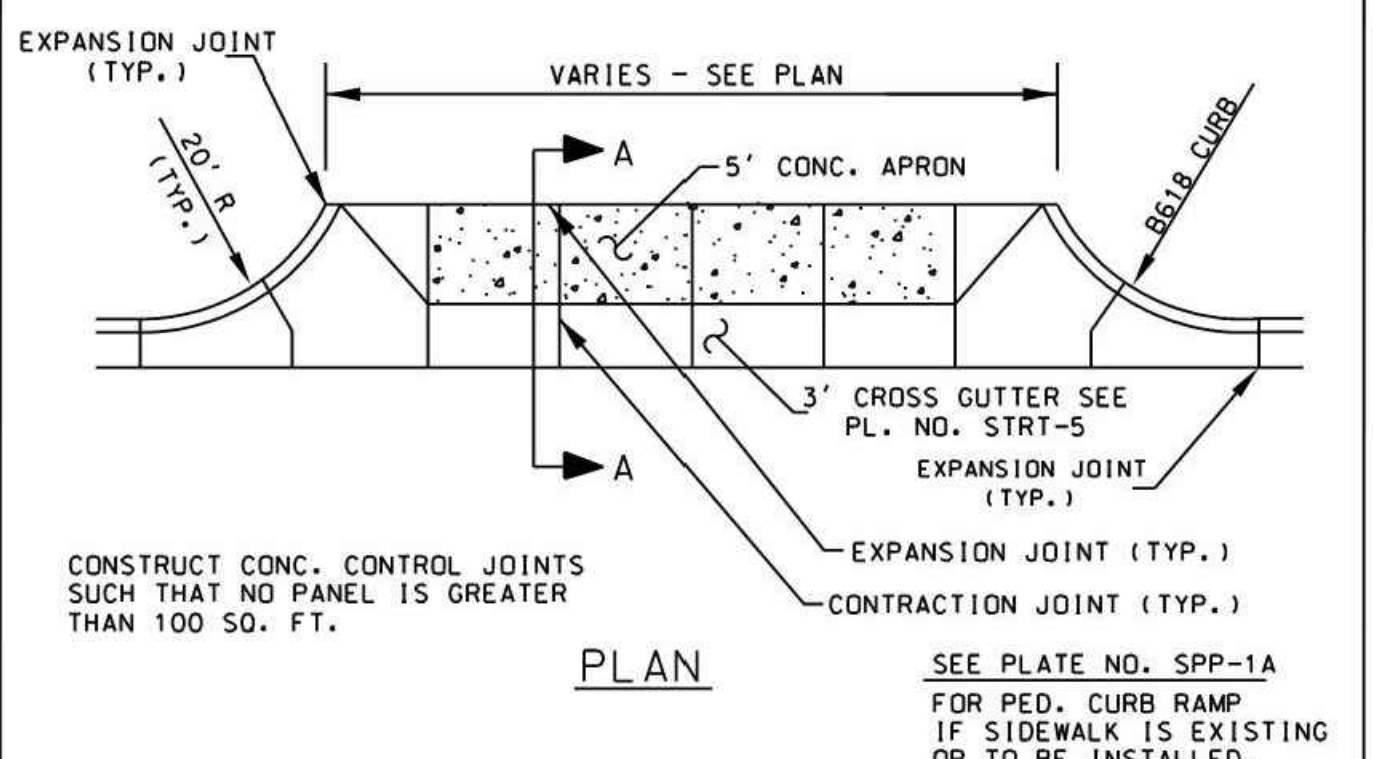
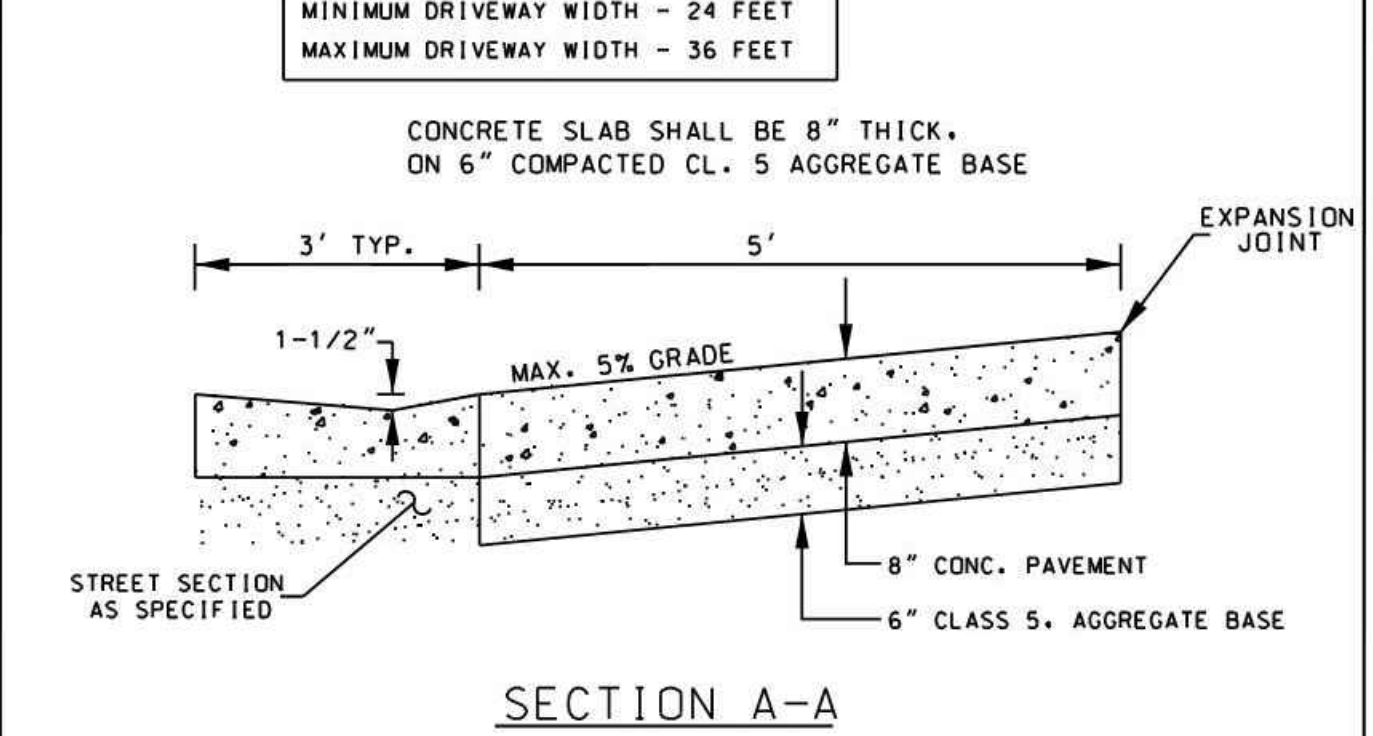
DRAWN BY:	STANDARD DETAILS	REVISED:	2-02
APPROV. BY:	CONCRETE WALK SECTION CITY OF HOPKINS	CITY PL. NO.:	STRT-2A

DOWEL BAR PLACEMENT FOR STRUCTURES IN CONCRETE PAVEMENT

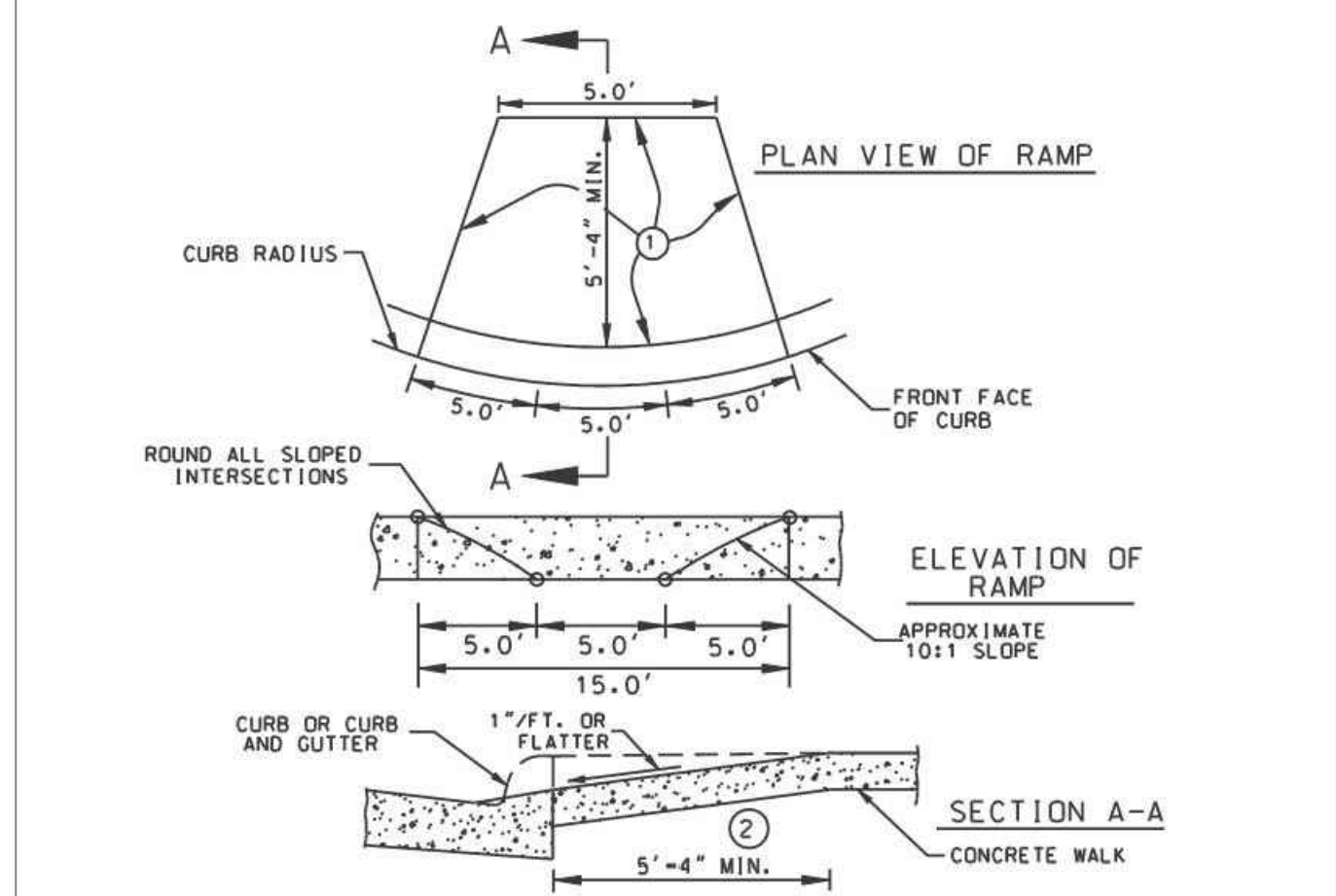
#4 REBAR IN 4" TO 6" CONCRETE PANELS  
#8 REBAR IN 8" CONCRETE PANELS



DRAWN BY:	STANDARD DETAILS	REVISED:	5-02
APPROV. BY:	STRUCTURES IN CONCRETE PANELS CITY OF HOPKINS	CITY PL. NO.:	STRT-16

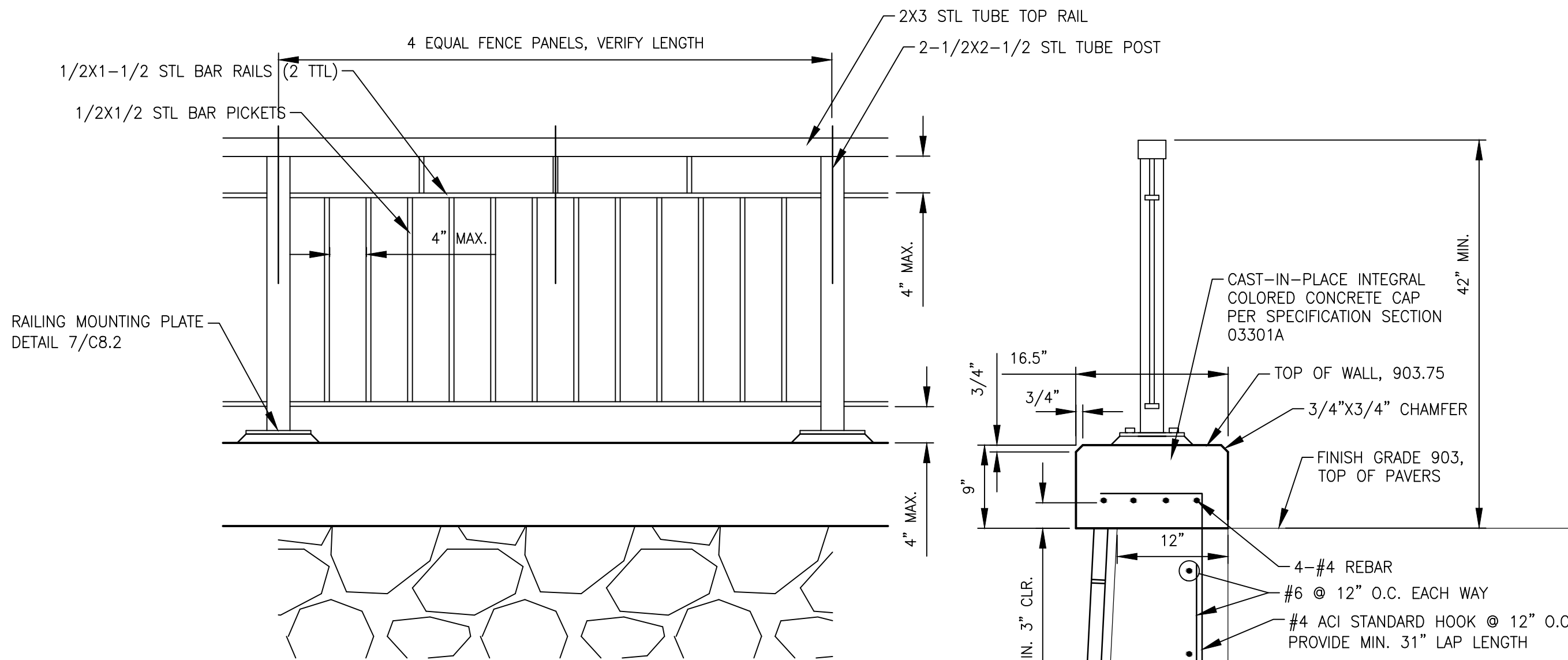


DRAWN BY:	STANDARD DETAILS	REVISED:	12-02
APPROV. BY:	INDUSTRIAL / COMMERCIAL DRIVEWAY CITY OF HOPKINS	CITY PL. NO.:	STRT-6A



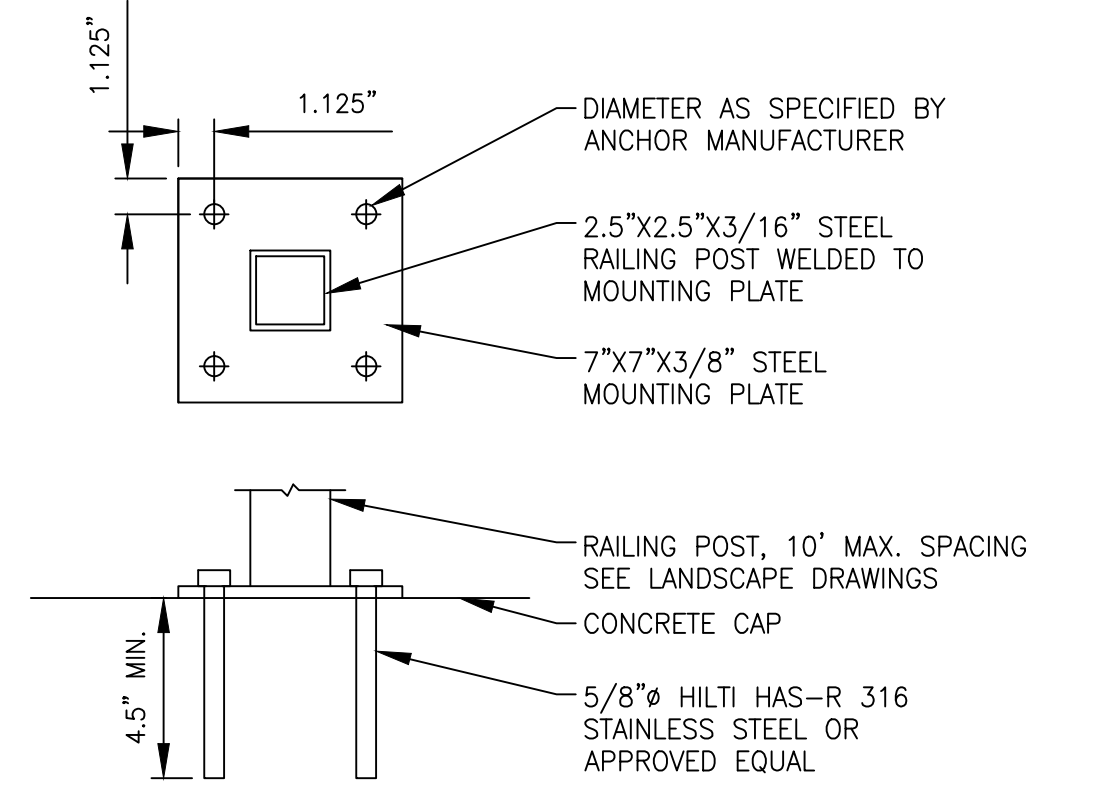
NOTE:  
THE CURB AND CURB TRANSITION ON THE RAMP WILL BE PAID FOR AS LINEAR FEET OF CONCRETE CURB OR CONCRETE CURB AND GUTTER. THE RAMP AREA WILL BE PAID FOR AS SQUARE FEET OF CONCRETE WALK. SURFACE TREATMENT WILL BE CONSIDERED INCIDENTAL.  
1. SURFACE TREATMENT A: THE CONCRETE MIX FOR SURFACE TREATMENT A ONLY, SHALL CONFORM TO MIX 3A37EX. IMMEDIATELY AFTER CONCRETE PLACEMENT AND FINISHING, AND AFTER CONTRACTION JOINTS ARE FORMED, AN APPROVED SURFACE RETARDER SHALL BE APPLIED TO THE AREA REQUIRED TO BE EXPOSED. AFTER ADEQUATE CURE, WITH 3752 WATERPROOF CURING PAPER OR 3756 PLASTIC CURING BLANKETS, THE SURFACE SHALL BE LIGHTLY RINSED TO WASH MORTAR AND EXPOSE THE AGGREGATE.  
SURFACE TREATMENT B: IN LIEU OF THE ABOVE TREATMENT A, THE CONTRACTOR AT HIS OPTION AFTER NORMAL CONCRETE FINISHING SHALL COMPLETELY EMBED AGGREGATE MEETING THE REQUIREMENTS OF SPEC. 3137 CA-70 MODIFIED TO 100% OF THE MATERIAL 1/2" TO 3/8" IN SIZE, IN THE GREEN CONCRETE. THE SURFACE SHOULD THEN BE FINISHED AGAIN AND AN APPROVED SURFACE RETARDER SHALL THEN BE APPLIED TO THE AREA REQUIRED TO BE EXPOSED. AFTER ADEQUATE CURE WITH 3752 WATERPROOF CURING PAPER OR 3756 PLASTIC CURING BLANKETS THE SURFACE SHALL BE LIGHTLY RINSED TO WASH OFF AND EXPOSE THE AGGREGATE.  
2. VARIES WITH CURB HEIGHT. EXAMPLE SHOWN IS FOR 6" CURB HEIGHT.

DRAWN BY:	STANDARD DETAILS	REVISED:	9-01
APPROV. BY:	PEDESTRIAN CURB RAMP IN PUBLIC RIGHT-OF-WAY CITY OF HOPKINS	CITY PL. NO.:	SPP-1A



NOTES:  
1. ALL STEEL TO BE HOT-DIPPED GALVANIZED WITH DARK BRONZE PAINT COLOR TO BE APPROVED.  
2. PRECAST WALL CAP TO HAVE TAN INTEGRAL COLOR TO BE APPROVED AND ACID ETCH FINISH.  
3. SUBMIT SHOP DRAWINGS OF RAILING FOR APPROVAL.  
4. PROVIDE ALL NECESSARY ATTACHMENT HARDWARE, STAINLESS STEEL

CAP AND RAILING DETAIL  
NOT TO SCALE



RAILING MOUNTING PLATE DETAIL  
NOT TO SCALE

I hereby certify that this plan, specification, or supervision and I am a duly licensed Engineer under the laws of the State of Minnesota.  
CHRISTOPHER MEEHAN  
Date: \_\_\_\_\_  
License No. 43 \_\_\_\_\_

COTTAGEVILLE PARK  
PHASE 1  
Hopkins, Minnesota  
Minnehaha Creek Watershed District

SCALE: AS SHOWN  
NOTE: DIMENSIONS ARE IN FEET AND INCHES. DIMENSIONS IN PARENTHESES ARE FOR INFORMATION ONLY. DIMENSIONS IN BRACKETS ARE FOR MEASUREMENTS THAT ARE NOT INDICATED.

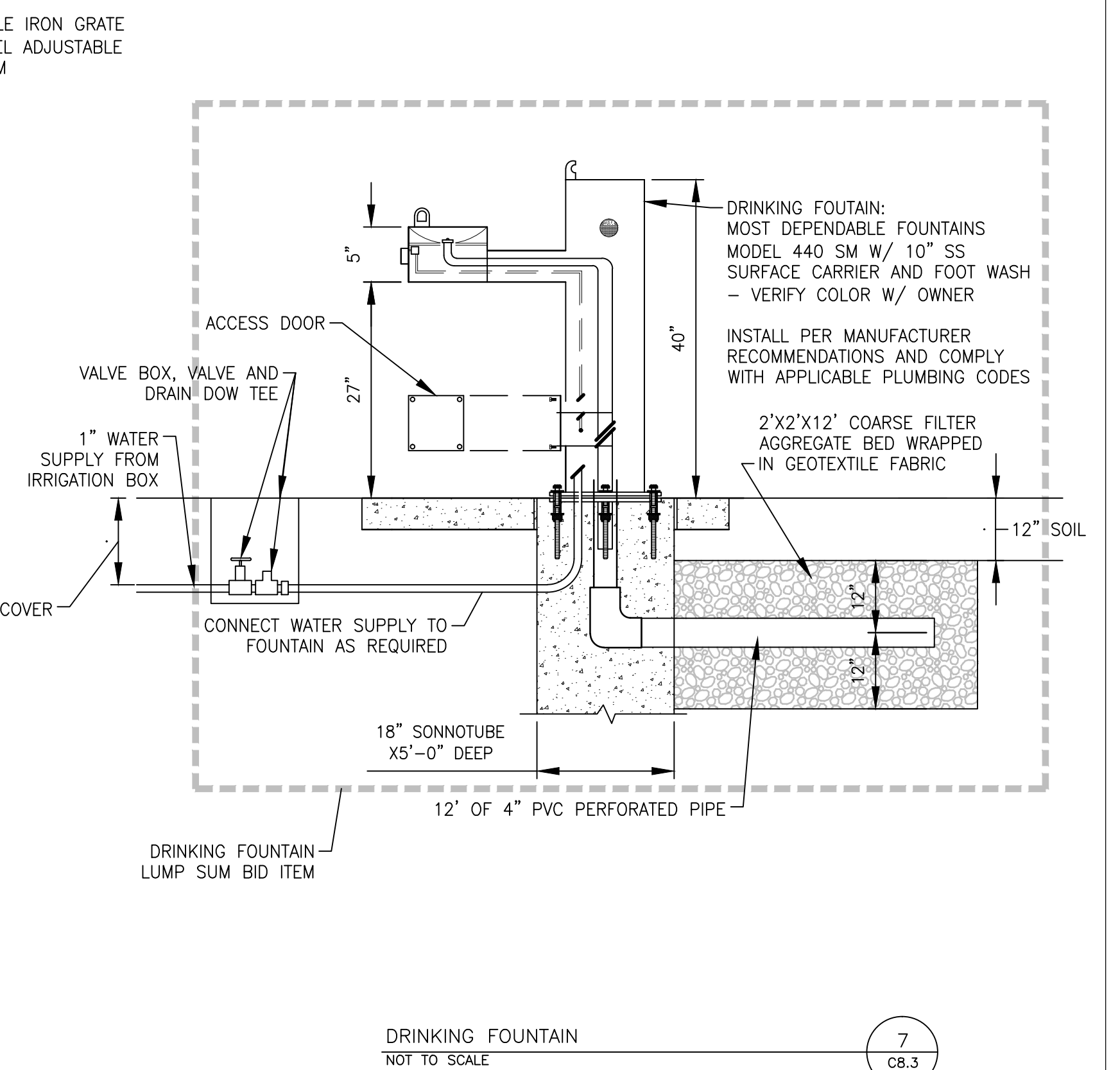
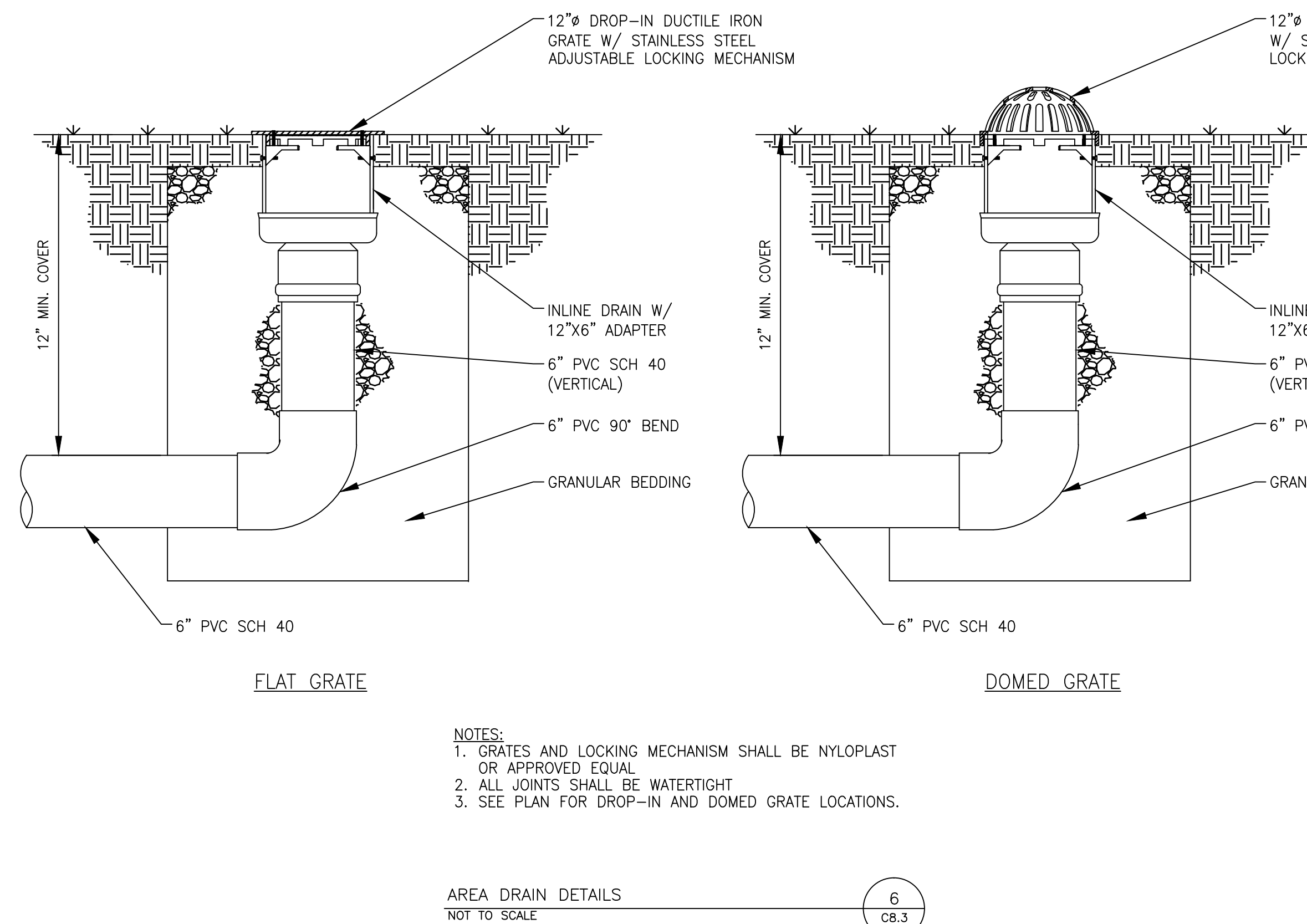
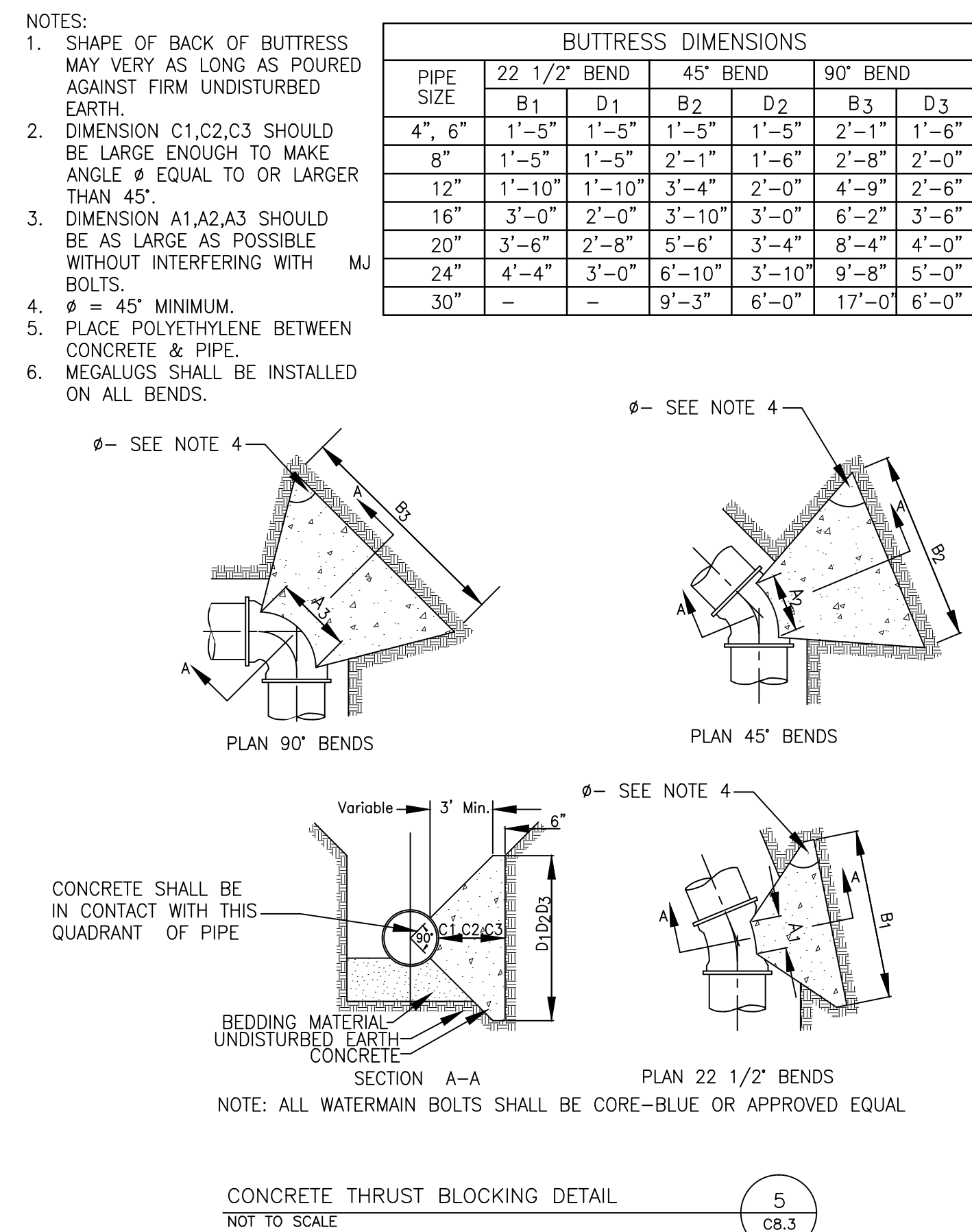
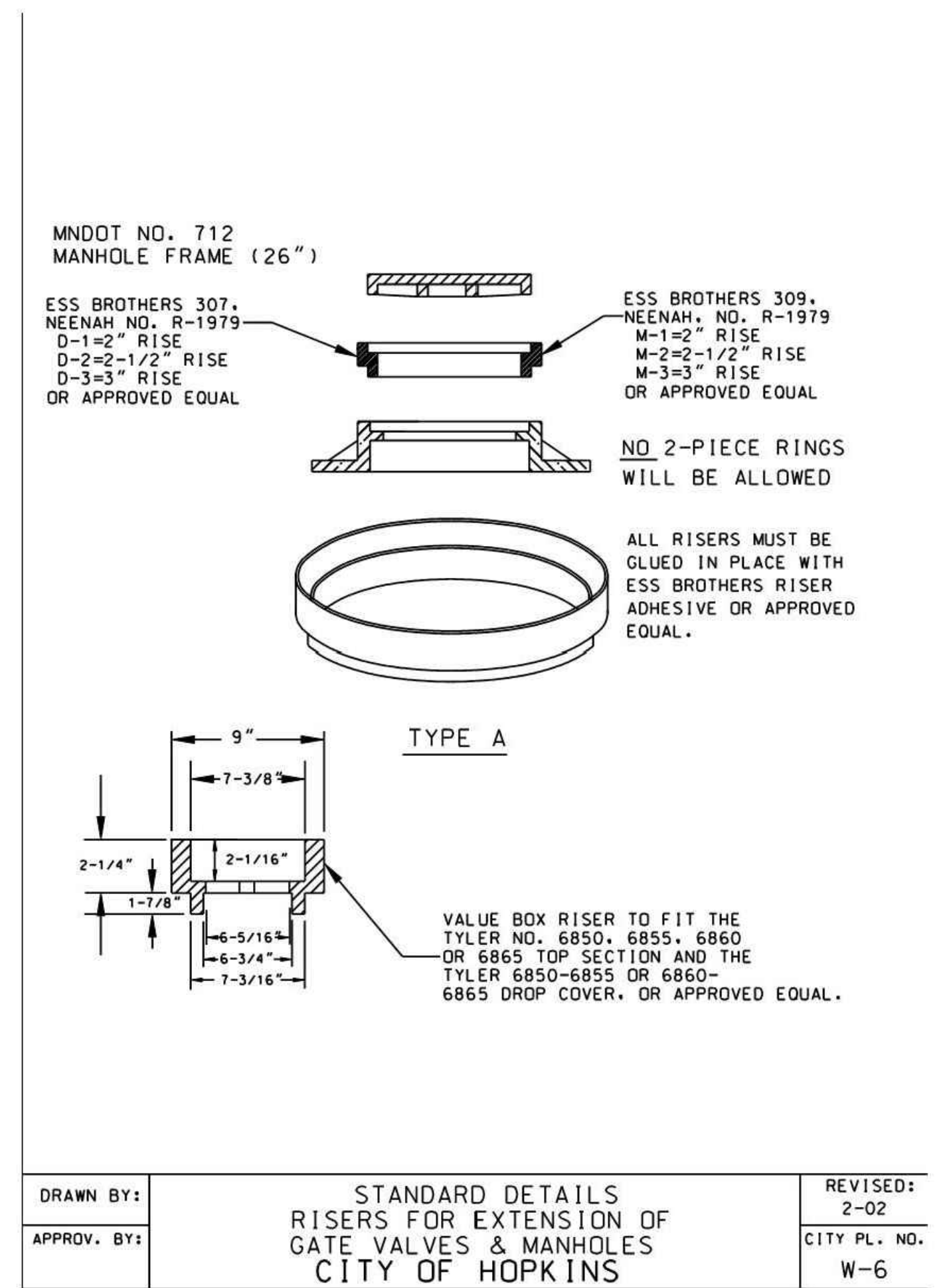
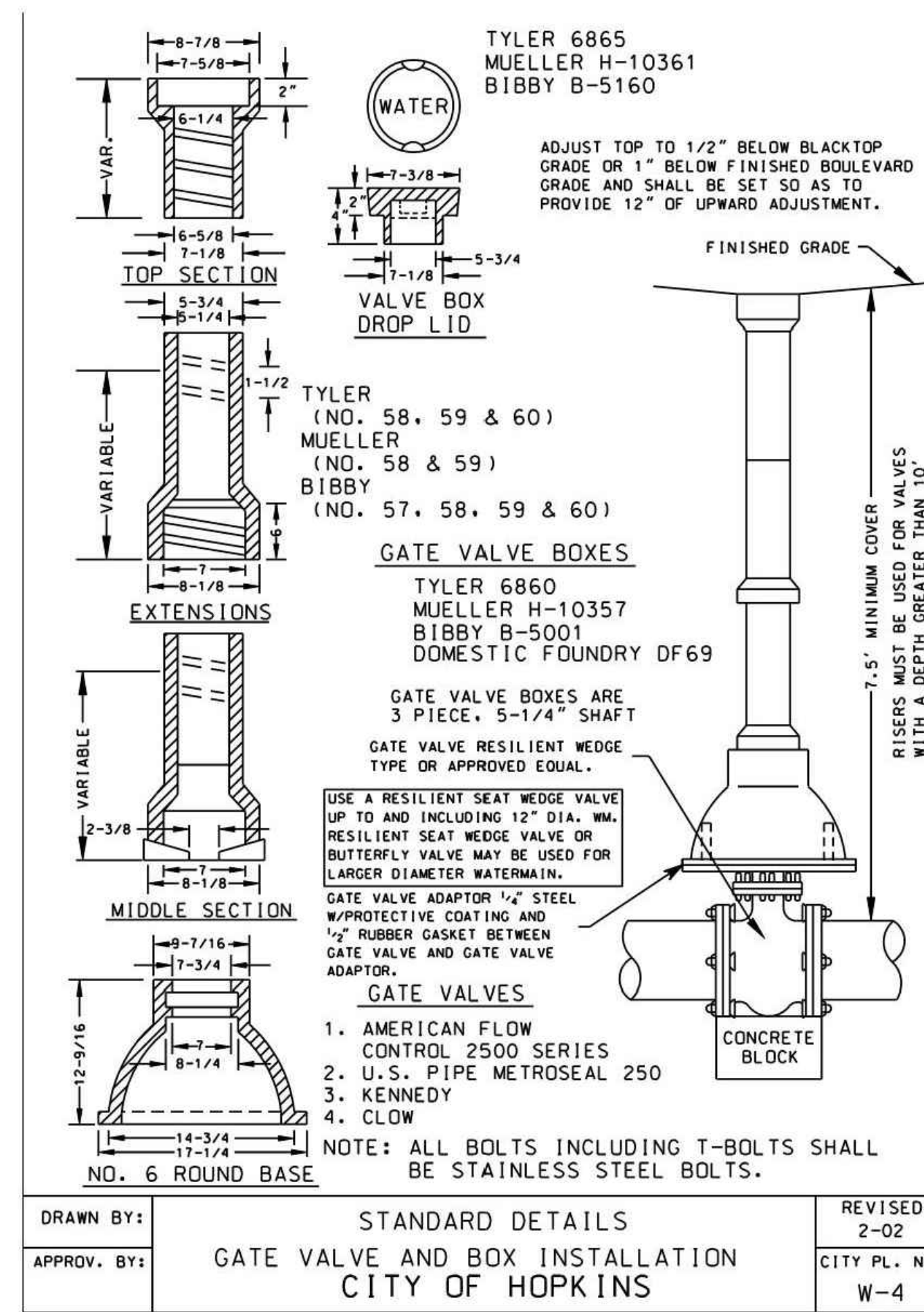
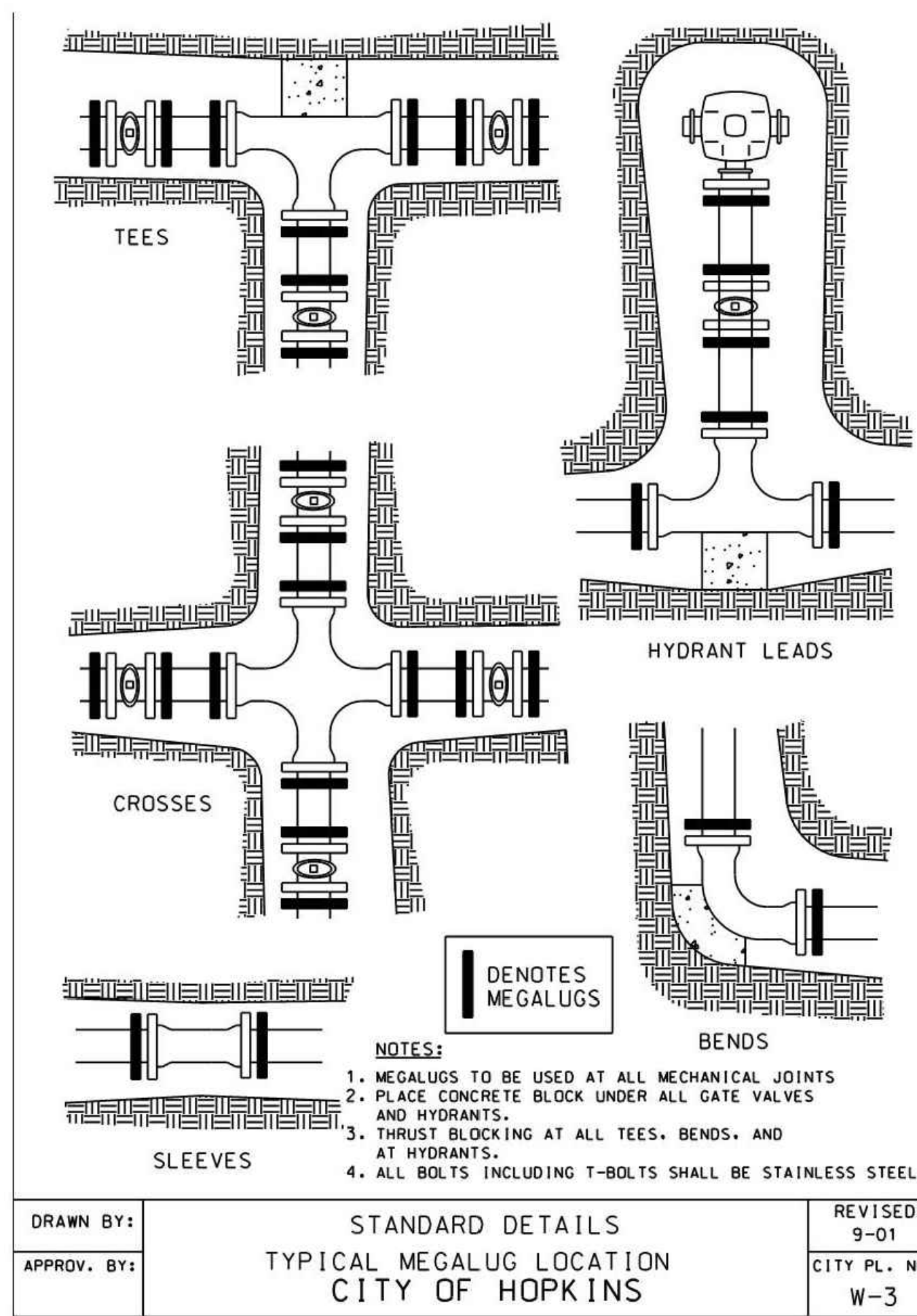
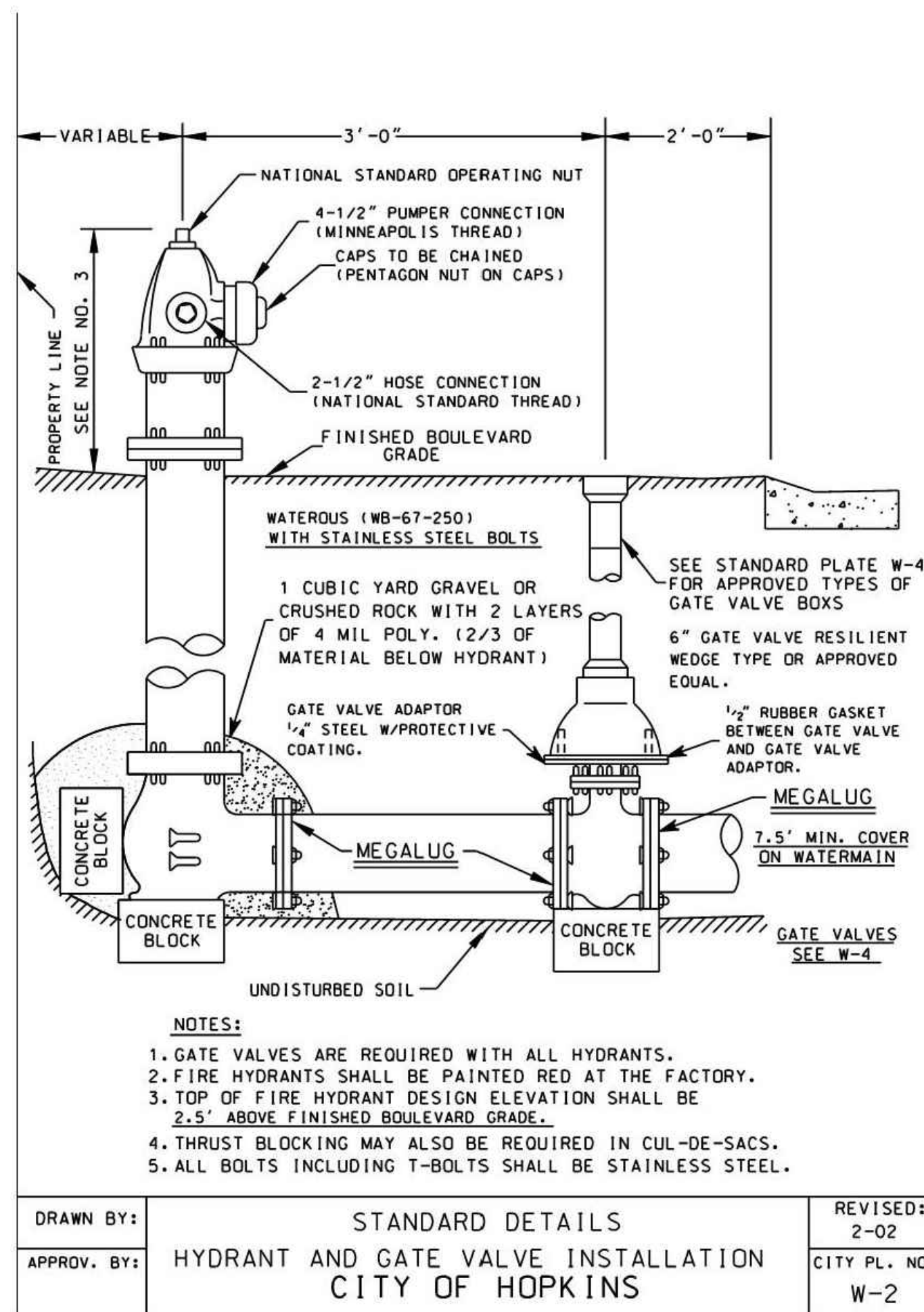
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XX/XX/14	BID ISSUE

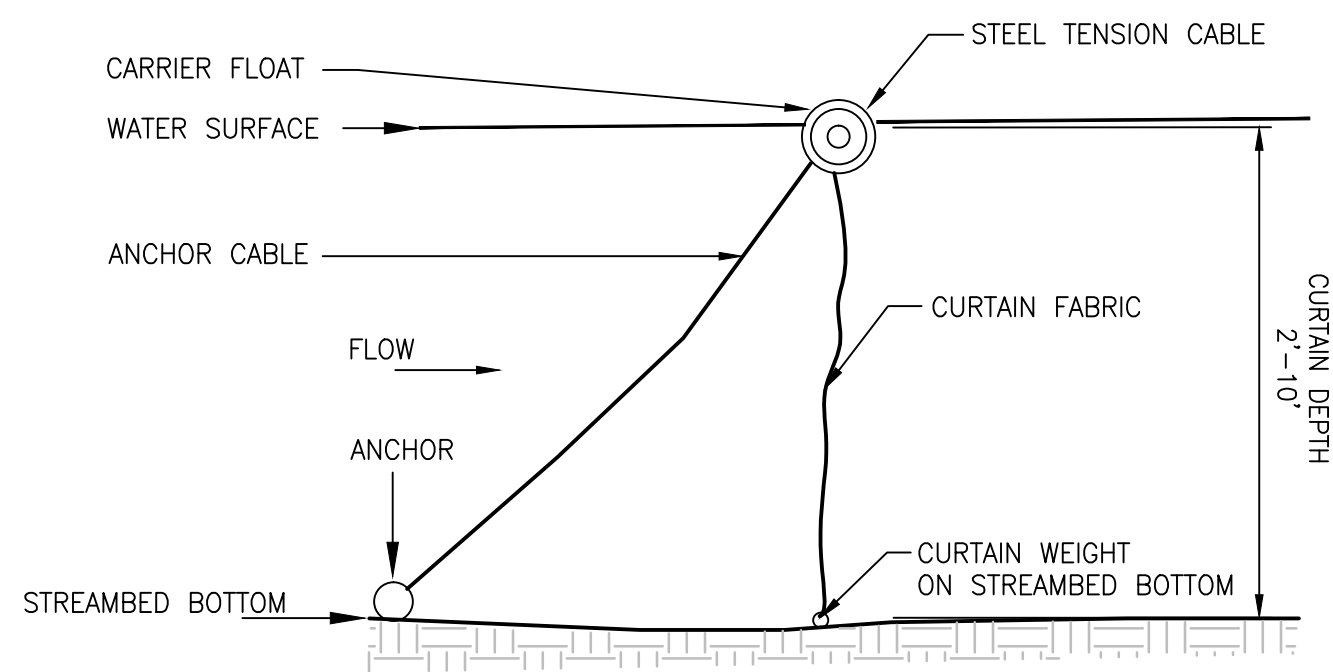
REVISIONS		
NO.	DATE	ISSUE

DRAWING TITLE:  
CIVIL  
DETAILS

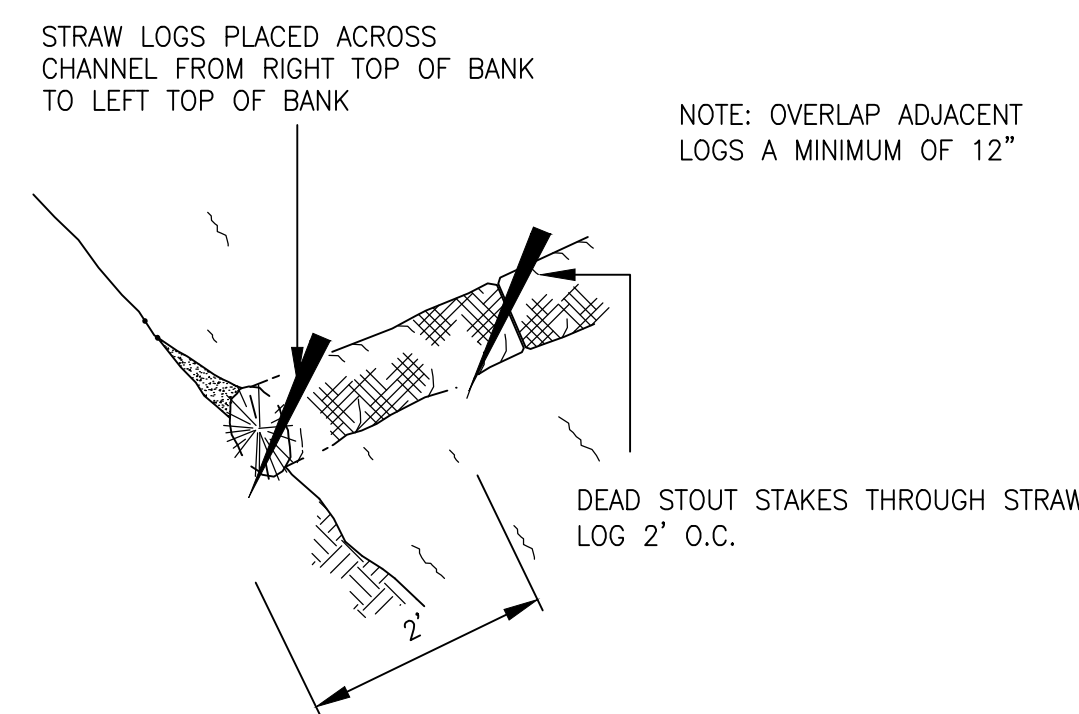
PROJECT #: 0185-5097  
DRAWN BY: MJS  
CHECKED BY: GJM  
DRAWING NO.:

C8.2

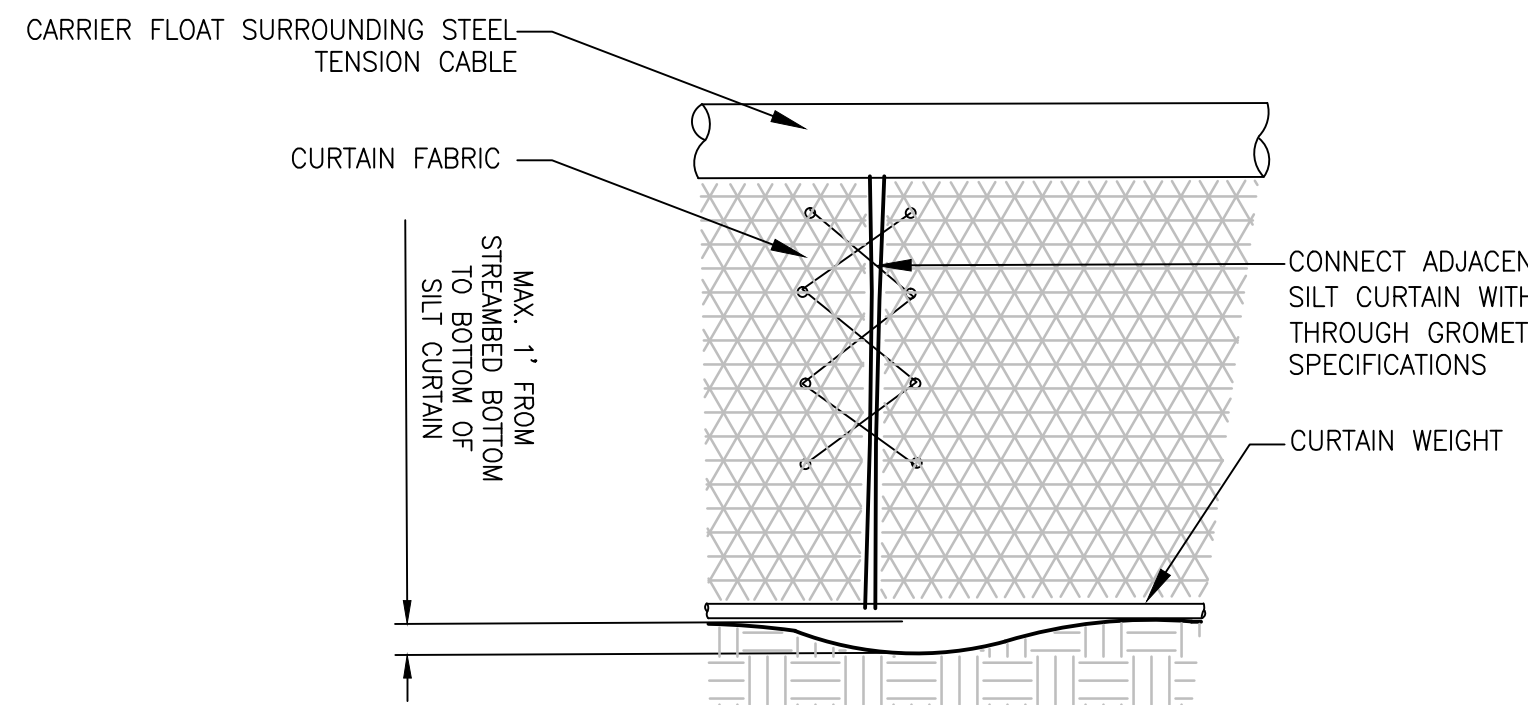




SECTION

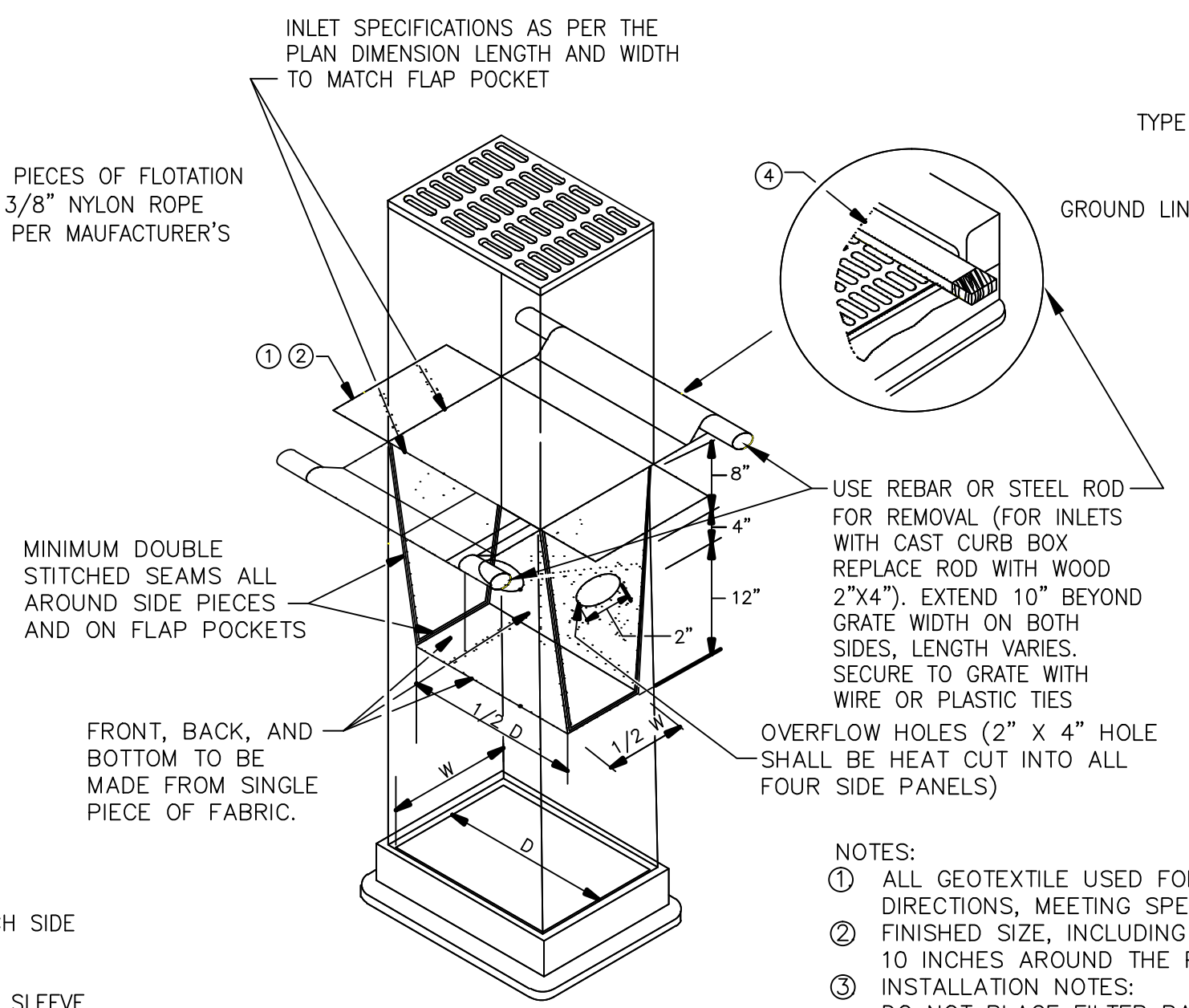


BIOROLL DETAIL  
NOT TO SCALE



PROFILE

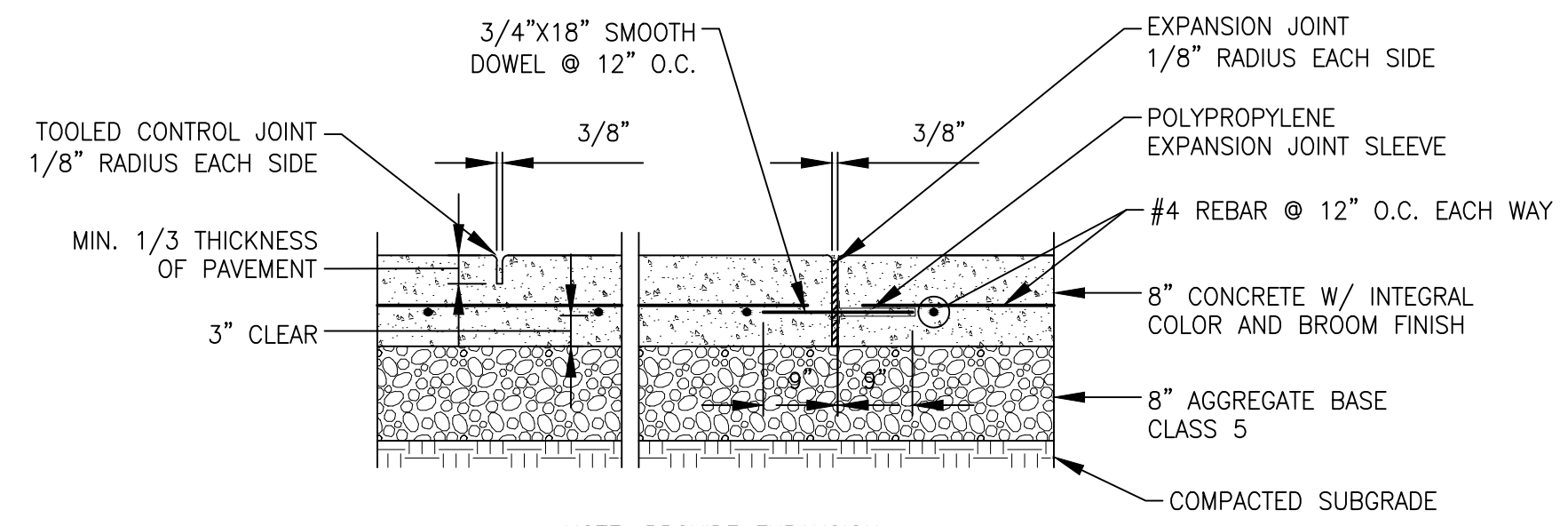
FLOTATION SILT CURTAIN DETAIL  
NOT TO SCALE



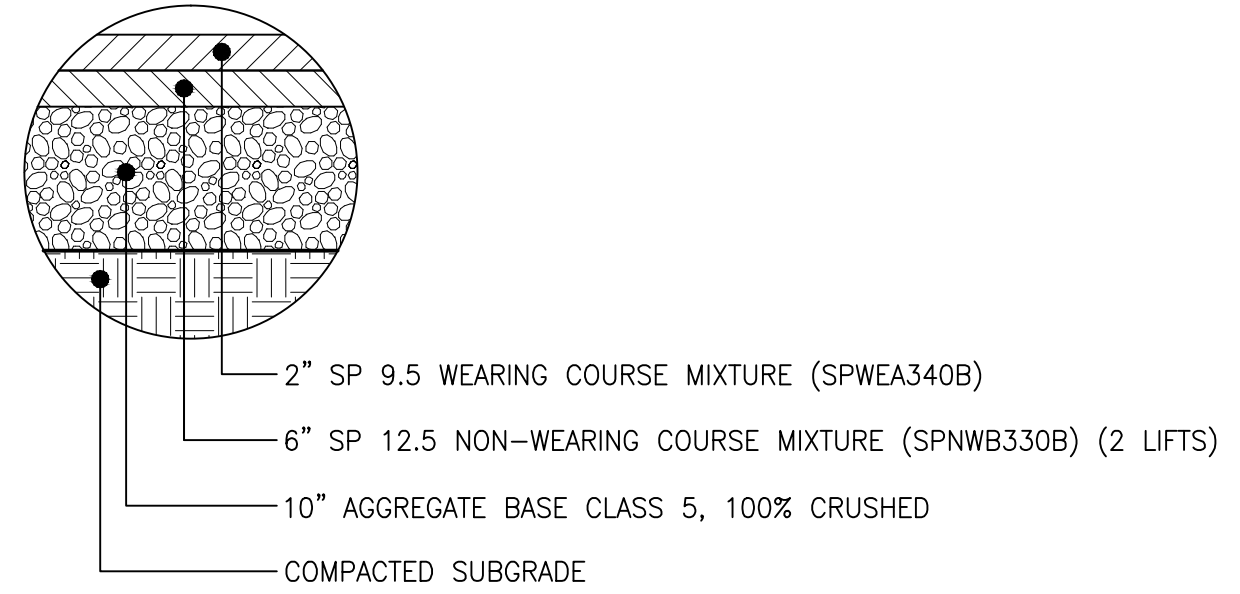
FILTER BAG INSERT  
(CAN BE INSTALLED IN ANY INLET TYPE WITH OR WITHOUT A CURB BOX)

INLET PROTECTION DETAIL  
NOT TO SCALE

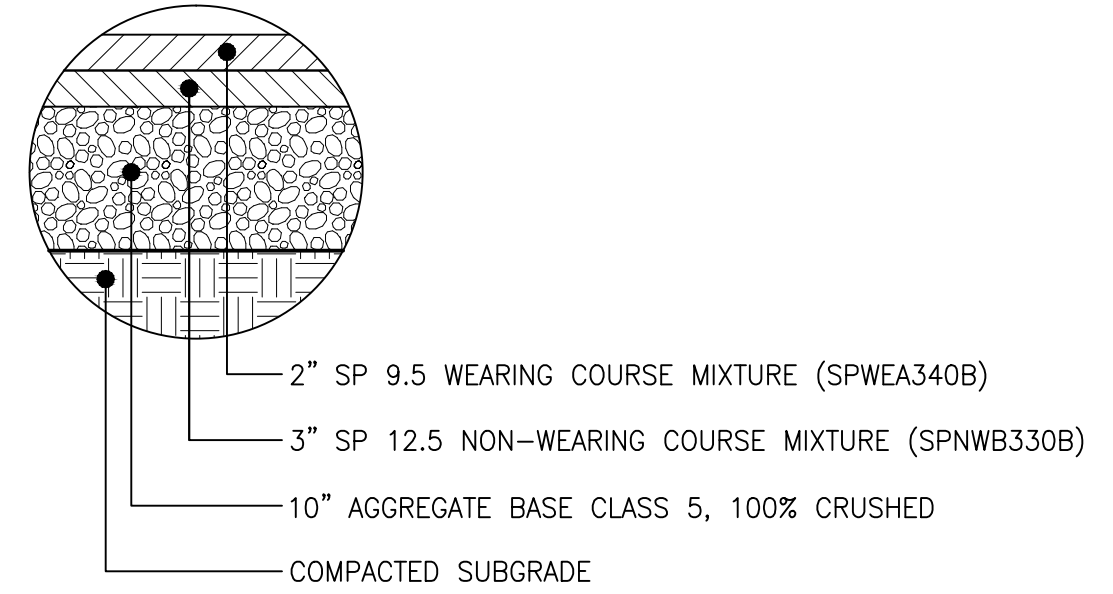
- NOTES:
- ALL GEOTEXTILE USED FOR INLET PROTECTION SHALL BE MONOFILAMENT IN BOTH DIRECTIONS, MEETING SPEC. 3886.
  - FINISHED SIZE, INCLUDING POCKETS WHERE REQUIRED SHALL EXTEND A MINIMUM OF 10 INCHES AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.
  - INSTALLATION NOTES: DO NOT PLACE FILTER BAG INSERT IN INLETS SHALLOWER THAN 30 INCHES, MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE. THE PLACED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE OF 3 INCHES BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES. WHERE NECESSARY THE CONTRACTOR SHALL CLINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3 INCH SIDE CLEARANCE.
  - FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2"x4" OR USE A ROCK SOCK OR SAND BAGS IN PLACE OF THE FLAP POCKETS.



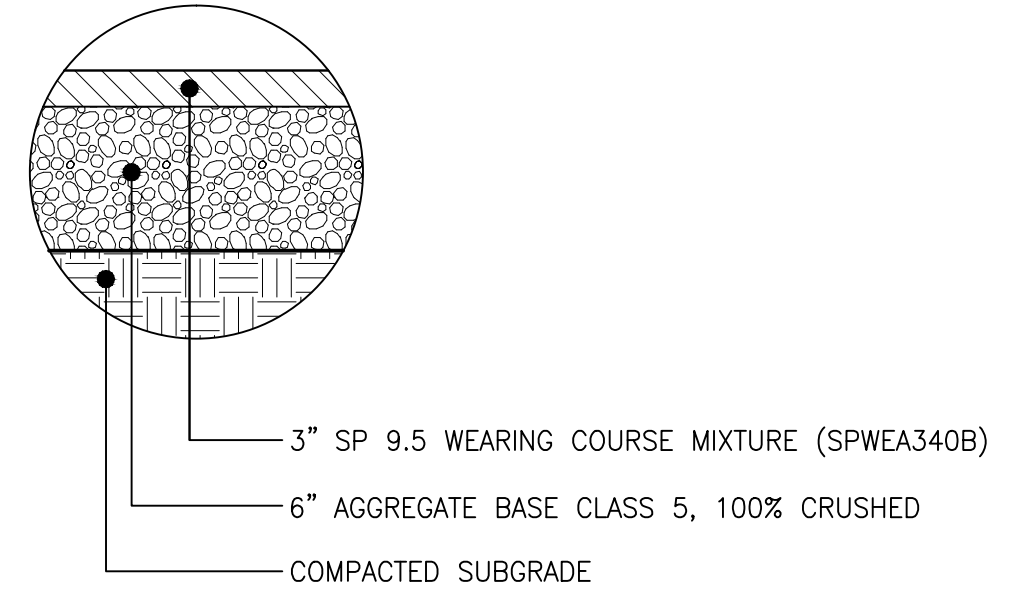
REINFORCED CONCRETE PAVEMENT DETAIL  
NOT TO SCALE



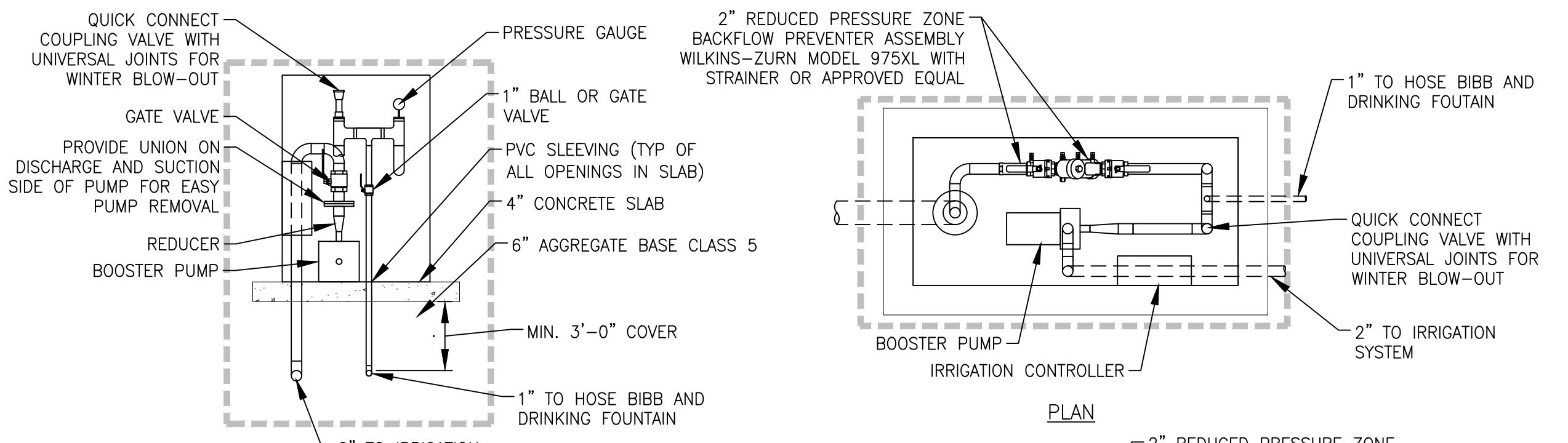
TYPICAL PAVING SECTION - BLAKE RD/C.R. 20  
NOT TO SCALE



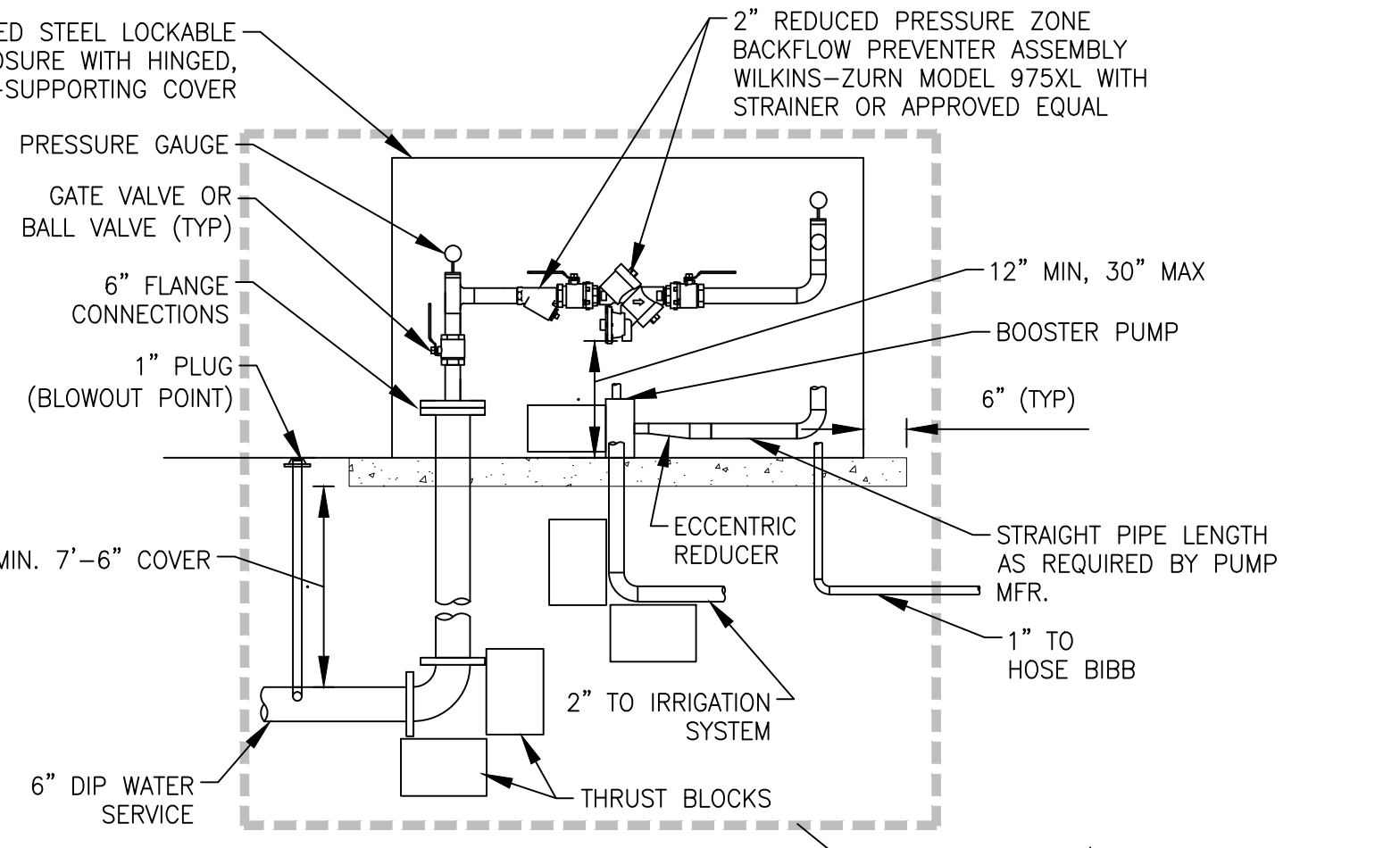
TYPICAL PAVING SECTION - LAKE ST AND ALLEYWAY  
NOT TO SCALE



TYPICAL PAVING SECTION - DRIVEWAYS  
NOT TO SCALE



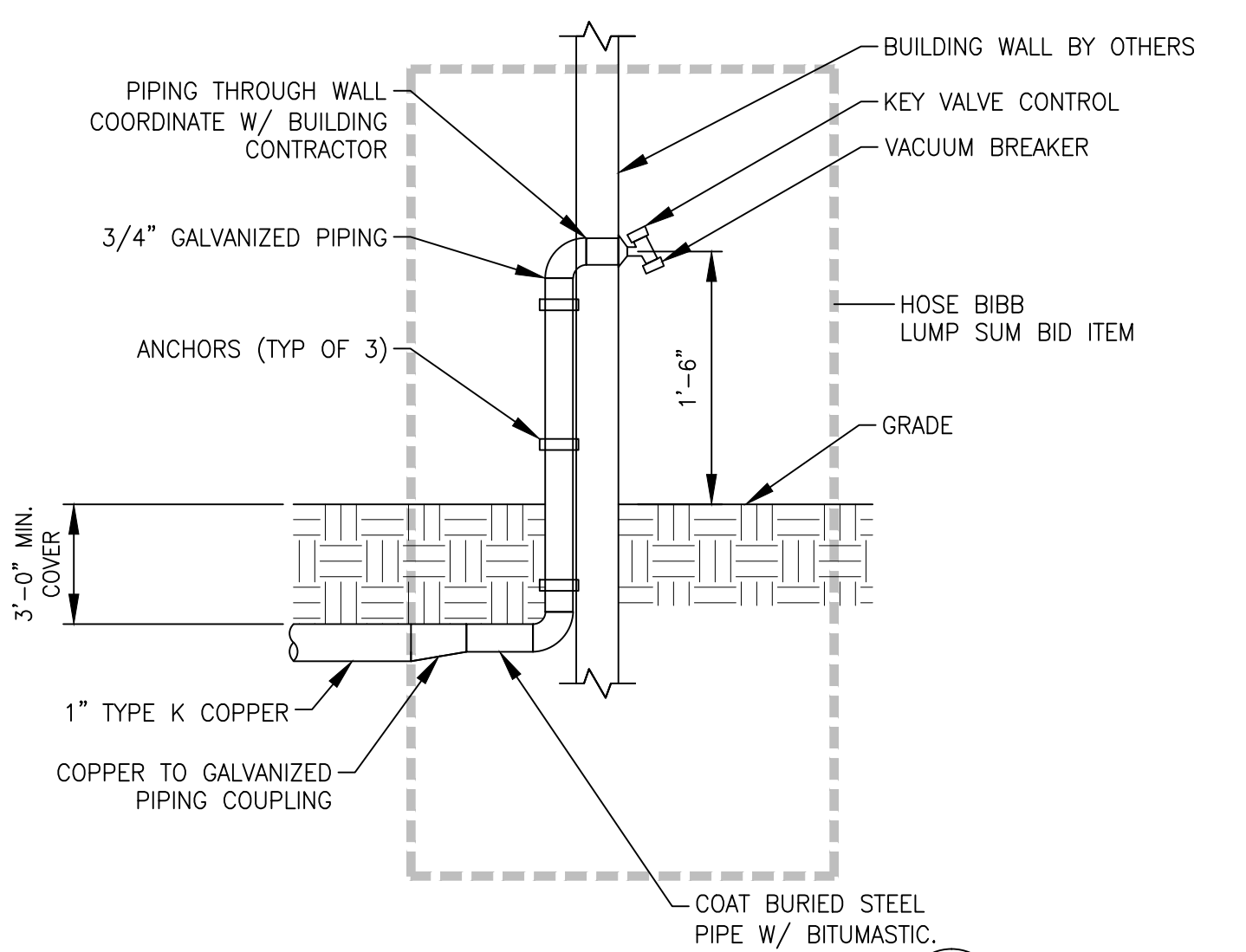
ELEVATION



ELEVATION

- NOTE:
- CONNECT TO 6" WATER SERVICE FLANGE WITH 6" 150 LB CAST BRONZE OR STAINLESS STEEL FLANGE AND PROVIDE 2" TYPE L COPPER TUBING RATED FOR MINIMUM 150 PSI.
  - PROVIDE ALL COUPLINGS/ADAPTERS/FITTINGS AS REQUIRED FOR INSTALLATION.
  - SLOPE PIPING TO ACCOMMODATE WINTERIZATION.
  - PROVIDE CORROSION RESISTANT PIPE SUPPORTS AND RESTRAINTS TO SUPPORT AND PREVENT SWAYING OF PIPING AS REQUIRED.
  - CONTRACTOR TO SUPPLY AND INSTALL PIPING, VALVES, FITTINGS, ACCESSORIES, ETC. AS REQUIRED TO PROVIDE A COMPLETE AND OPERATIONAL SYSTEM THAT MEETS ALL APPLICABLE PLUMBING CODES.
  - BOOSTER PUMP SHALL BE BERKELEY MODEL SS1XN-3/4, 115 V, 1 PHASE, TEFC OR APPROVED EQUAL. BOOSTER PUMP SHALL BE CONTROLLED BY IRRIGATION CONTROLLER.
  - IRRIGATION CONTROLLER (BY IRRIGATION CONTRACTOR) SHALL BE MOUNTED IN IRRIGATION BOX USING UNI-STRUT OR APPROVED EQUAL. PROVIDE CLEARANCES AS REQUIRED BY CONTROLLER MANUFACTURER.

IRRIGATION BOX  
NOT TO SCALE



HOSE BIBB  
NOT TO SCALE

I hereby certify that this plan, specification, or drawing was prepared by me or under my direct supervision and I am a duly licensed Engineer under the laws of the State of Minnesota.  
REGISTERED PROFESSIONAL ENGINEER MEE-AN  
Date: 08/14/14 License No: 43

COTTAGEVILLE PARK  
PHASE 1  
Hopkins, Minnesota  
Minnehaha Creek Watershed District

SCALE: AS SHOWN  
SMALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.  
ARCHITECT FOR MEASUREMENTS THAT ARE NOT INDICATED

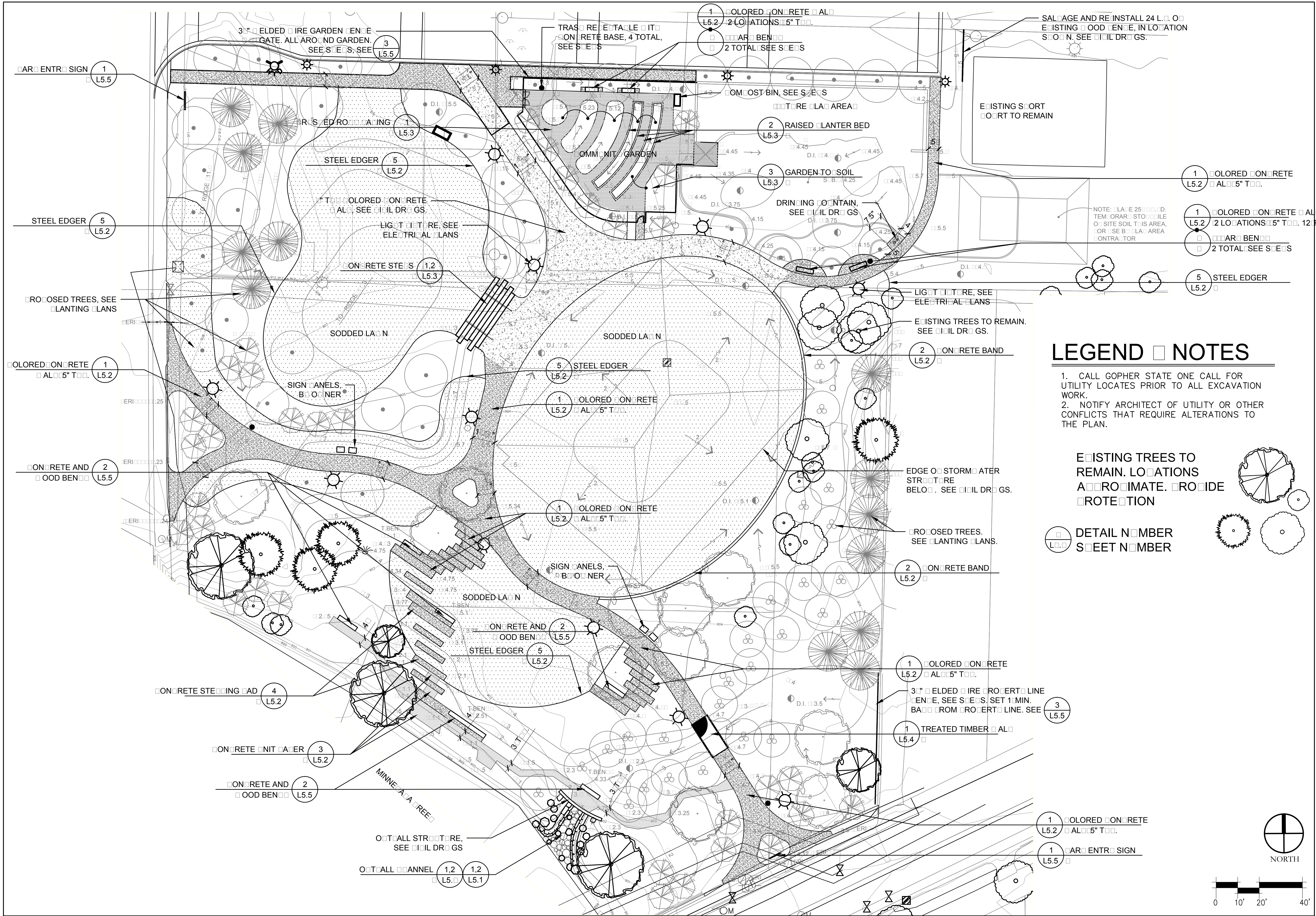
DATE	ISSUE
XX/XX/14	BID ISSUE

REVISIONS		
NO.	DATE	ISSUE

DRAWING TITLE:  
**CIVIL DETAILS**

PROJECT #: 0185-5097  
DRAWN BY: MJS  
CHECKED BY: GJM  
DRAWING NO:

**C8.4**



### LEGEND & NOTES

- CALL GOPHER STATE ONE CALL FOR UTILITY LOCATES PRIOR TO ALL EXCAVATION WORK.
- NOTIFY ARCHITECT OF UTILITY OR OTHER CONFLICTS THAT REQUIRE ALTERATIONS TO THE PLAN.

EXISTING TREES TO REMAIN. LOCATIONS APPROXIMATE. ROTATION ROTATION

PROPOSED TREES. SEE PLANTING PLANS.

EDGE OF STORM WATER STRUCTURE BELOW. SEE DRAINAGE.

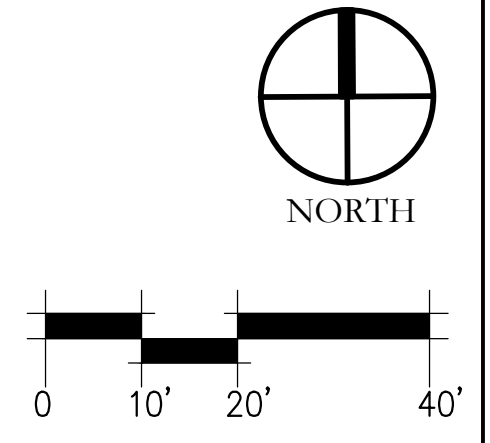
DETAIL NUMBER SHEET NUMBER

1 COLORED CONCRETE L5.2 AL 5" T

3 3" ELDED WIRE ROBERT LINE WENT, SEE S.E.S. SET 1 MIN. BACK FROM ROBERT LINE. SEE L5.5

1 COLORED CONCRETE L5.2 AL 5" T

1 CAR ENTR SIGN L5.5



City of Hopkins

Wenck  
Engineers • Scientists  
Business Professionals

HART HOWERTON

---

I hereby certify that this plan, specification, or supervision and I am a duly licensed Landscape Architect under the laws of the State of Minnesota.

ROLAND S. ABERG Date: 6/30/14 License No: 47464

---

**COTTAGEVILLE PARK PHASE 1**

Hopkins, Minnesota  
Minnehaha Creek Watershed District

---

SCALE: #####  
NOTE: THIS DRAWING IS TO BE USED FOR CONSTRUCTION. SCALE DIMENSIONS, UNLESS OTHERWISE SPECIFIED, SHALL BE IN FEET AND INCHES. DIMENSIONS FROM ARCHITECT FOR MEASUREMENTS THAT ARE NOT INDICATED.

DATE	ISSUE
XX/XX/14	BID ISSUE

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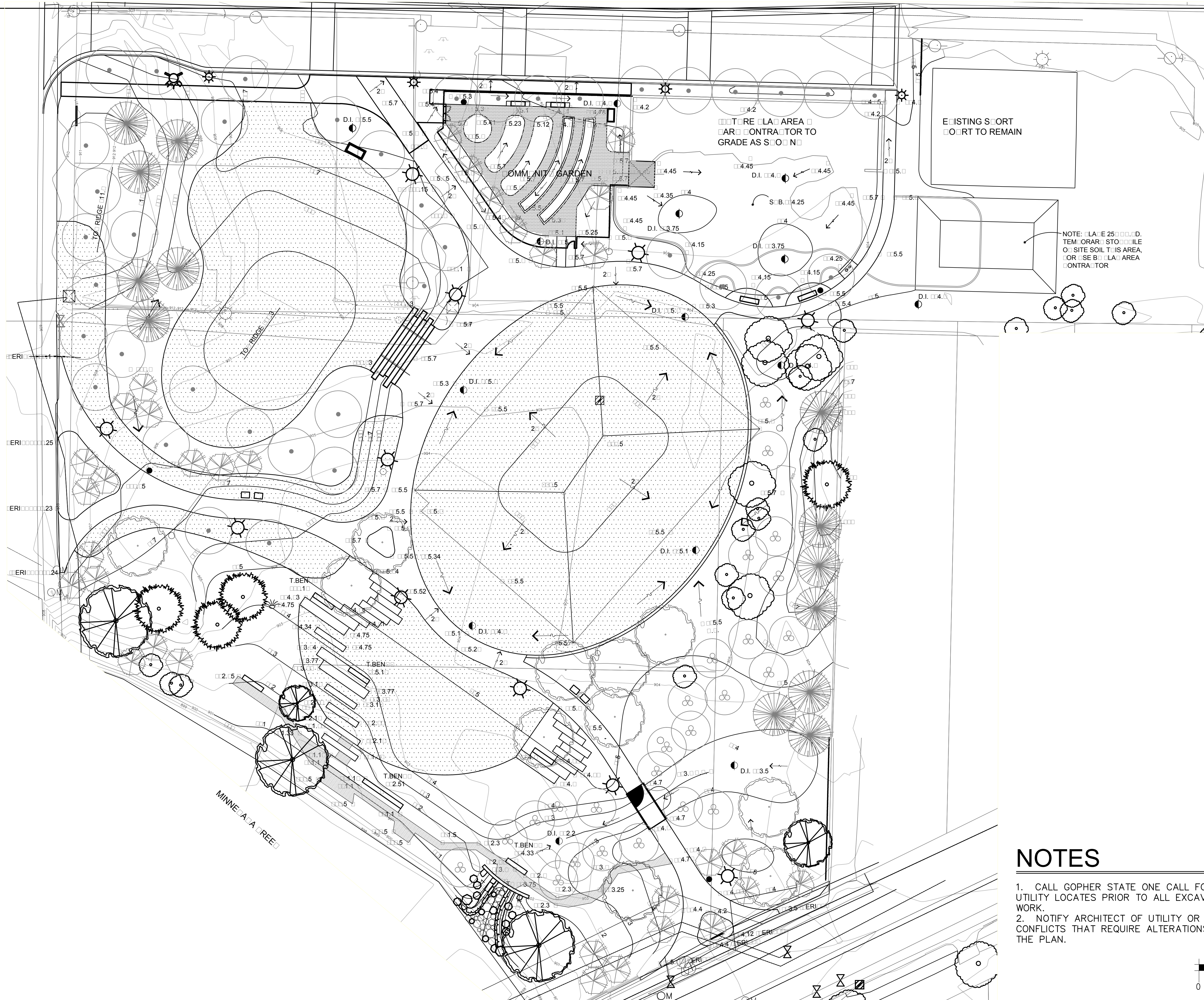
REVISIONS		
NO.	DATE	ISSUE

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DRAWING TITLE:  
**SITE LAYOUT PLAN**

---

PROJECT #: 10-032  
DRAWN BY: JAL  
CHECKED BY: RSA  
DRAWING NO: **L1.0**



I hereby certify that this plan, specification, or contract is my original work, that I am a duly licensed Landscape Architect under the laws of the State of Minnesota.

ROLAND S. ABERG  
License No.: 47464  
Date: 6/30/14

**COTTAGEVILLE PARK  
PHASE 1  
PLAN**  
Minnehaha Creek Watershed District

SCALE: #####  
SMALLER DIMENSIONS: SEE PLAN FOR NOTE  
SCALE DIMENSIONS: USE FIGURED DIMENSIONS  
ONLY FOR FIELD LOCATIONS FROM  
ARCHITECT FOR MEASUREMENTS THAT ARE  
NOT INDICATED.

DATE	ISSUE
XX/XX/14	BID ISSUE

REVISIONS		
NO.	DATE	ISSUE

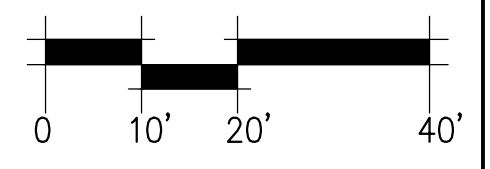
DRAWING TITLE:  
**SITE GRADING  
PLAN**

PROJECT #:  
10-032  
DRAWN BY:  
JAL  
CHECKED BY:  
RSA

DRAWING NO:  
**L2.0**

**NOTES**

1. CALL GOPHER STATE ONE CALL FOR UTILITY LOCATES PRIOR TO ALL EXCAVATION WORK.
2. NOTIFY ARCHITECT OF UTILITY OR OTHER CONFLICTS THAT REQUIRE ALTERATIONS TO THE PLAN.





## NOTES

1. FOR PLANT HOLE BACKFILL SEE PLANTING DETAILS, SHEETS L4.2, L4.3 AND PLANTING SPECS.
2. CALL GOPHER STATE ONE CALL FOR UTILITY LOCATES PRIOR TO ALL EXCAVATION WORK.
3. NOTIFY ARCHITECT OF UTILITY OR OTHER CONFLICTS THAT REQUIRE ALTERATIONS TO THE PLAN.

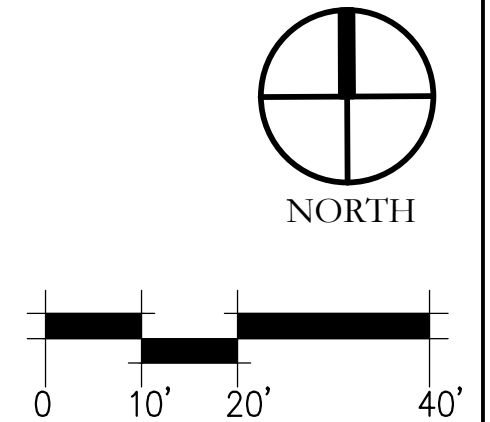
## LEGEND

- EXISTING TREES TO REMAIN. LOCATIONS APPROXIMATE. ROTATION, SEE SECTIONS
- SOIL CONDITIONING PROGRAM TYPE A: SEE DETAIL 3A/L5.3 AND SECTIONS. PROVIDE 2 INCHES COMPOST AND 4 INCHES REMIUM TO SOIL
  - SOIL CONDITIONING PROGRAM TYPE B: SEE DETAIL 3B/L5.3 AND SECTIONS. PROVIDE 2 INCHES COMPOST AND 4 INCHES REMIUM TO SOIL
  - SOIL CONDITIONING PROGRAM TYPE C: SEE DETAIL 3C/L5.3 AND SECTIONS. PROVIDE 4 INCHES REMIUM TO SOIL

DATE	ISSUE
xx/xx/14	BID ISSUE

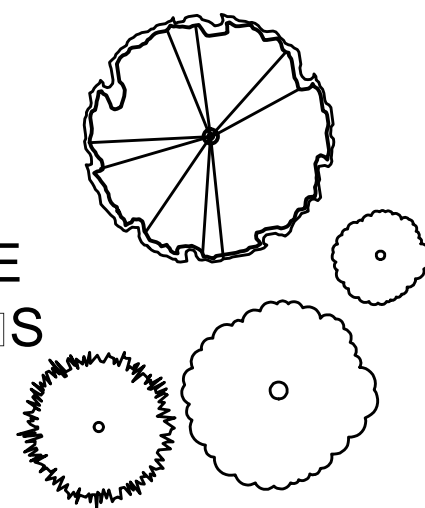
### REVISIONS

NO.	DATE	ISSUE



# LEGEND

EXISTING TREES TO REMAIN. LOCATIONS APPROXIMATE. ROTATION, SEE SHEETS



ROUNDER CENTER DRI IRRIGATION, THIS AREA. 1" EMITTER SPACING. 1" MAX. BETWEEN TUBING ROWS.

ROUNDER CENTER DRI IRRIGATION, THIS AREA. 24" EMITTER SPACING. NO ROW SPACING REQUIREMENT

ROUNDER CENTER 12" SRA ROTORS. 1" LEAD TO LEAD STORAGE. IT MAT. PRECIPITATION RATE.

EB ELECTRICAL SERVICE BOX, SEE ELECTRICAL DRAWINGS.

W IRRIGATION POINT CONNECTION TO MONITOR WATER SOURCE. SEE SOIL DRAWINGS. ASSUME 1" AND 5" GPM AT WATER MAIN.

C CENTER MOORE IRRIGATION CONTROLLER. MOUNT IN IRRIGATION BOX, THIS LOCATION. SEE SOIL DRUGS FOR BOX DETAIL. 12" COVER PROVIDED IN BOX. SEE ELECTRICAL DRUGS.

Q VALVE COOLER VALVE, SEE SHEETS

SL SLOPE TO 4" SLEEVES AT THESE LOCATIONS. SEE SHEETS FOR SLEEVE SIZES. EXTEND SLEEVES 1" BEYOND EDGE OF PAVING. PROVIDE MIN. 1" COVER ABOVE SLEEVES. MARK END WITH 2" OOD STATE, PAINTED WHITE. SLEEVES ARE INCIDENTAL TO BID ITEM "IRRIGATION SYSTEM A".

SO STOP OUT AND 1 1/2" MAIN LINE, THIS LOCATION. RUN 2" CONTROL LINES AND ONE GROUND WIRE FROM CONTROLLER LOCATION TO THIS POINT. TERMINATE EACH WIRE WITH WIRE CONNECTOR AND CLAMP IN ROUND VALVE BOX. MARK MAIN WITH 2" OOD STATE, PAINTED WHITE.

SEE SHEET LOCATIONS FOR COMPLETE SCHEDULE LIST AND ADDITIONAL INFORMATION.

**BID ALTERNATE 1**  
 DELETE ALL DRI IRRIGATION WHERE SCHEDULED. REPLACE WITH SRA IRRIGATION CENTER M ROTATOR. SRA 12" SRA 4" M 2" MAXIMUM LEAD TO LEAD SPACING TO BE 12" T., WITH CONTROL VALVES AS REQUIRED.

## NOTES

1. CALL GOPHER STATE ONE CALL FOR UTILITY LOCATES PRIOR TO ALL EXCAVATION WORK.
2. NOTIFY ARCHITECT OF UTILITY OR OTHER CONFLICTS THAT REQUIRE ALTERATIONS TO THE PLAN.

SCALE: ###  
NOTE: THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION. SCALE DIMENSIONS, UNLESS OTHERWISE SPECIFIED, ARE IN FEET AND DECIMALS THEREOF. DIMENSIONS FROM ARCHITECT FOR MEASUREMENTS THAT ARE NOT INDICATED.

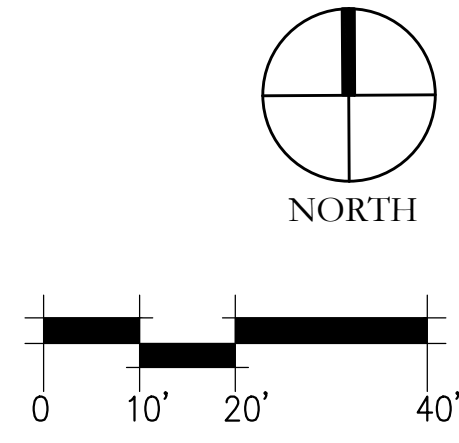
DATE	ISSUE
X/X/14	BID ISSUE

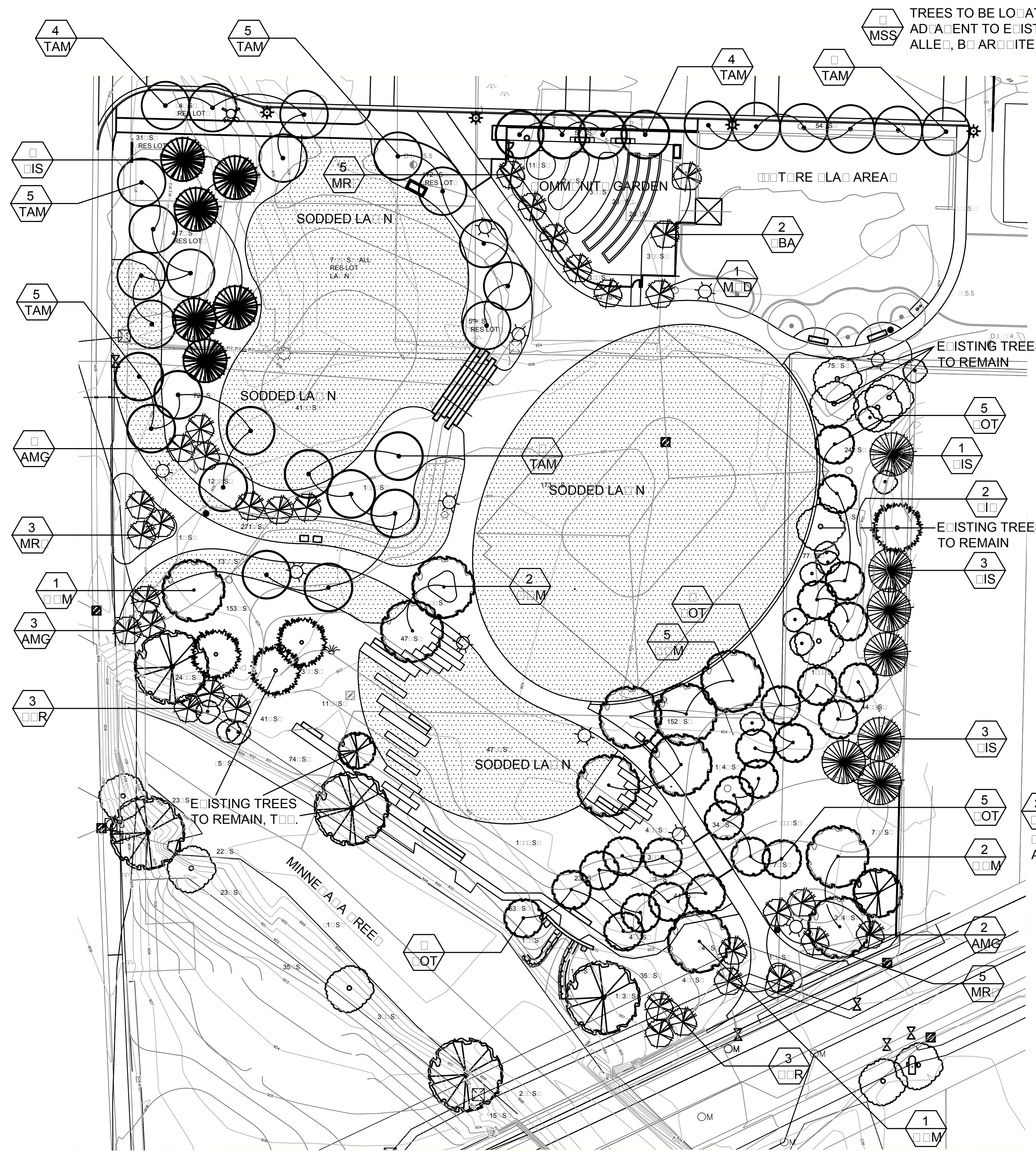
REVISIONS		
NO.	DATE	ISSUE

DRAWING TITLE:  
**IRRIGATION CONCEPT PLAN**

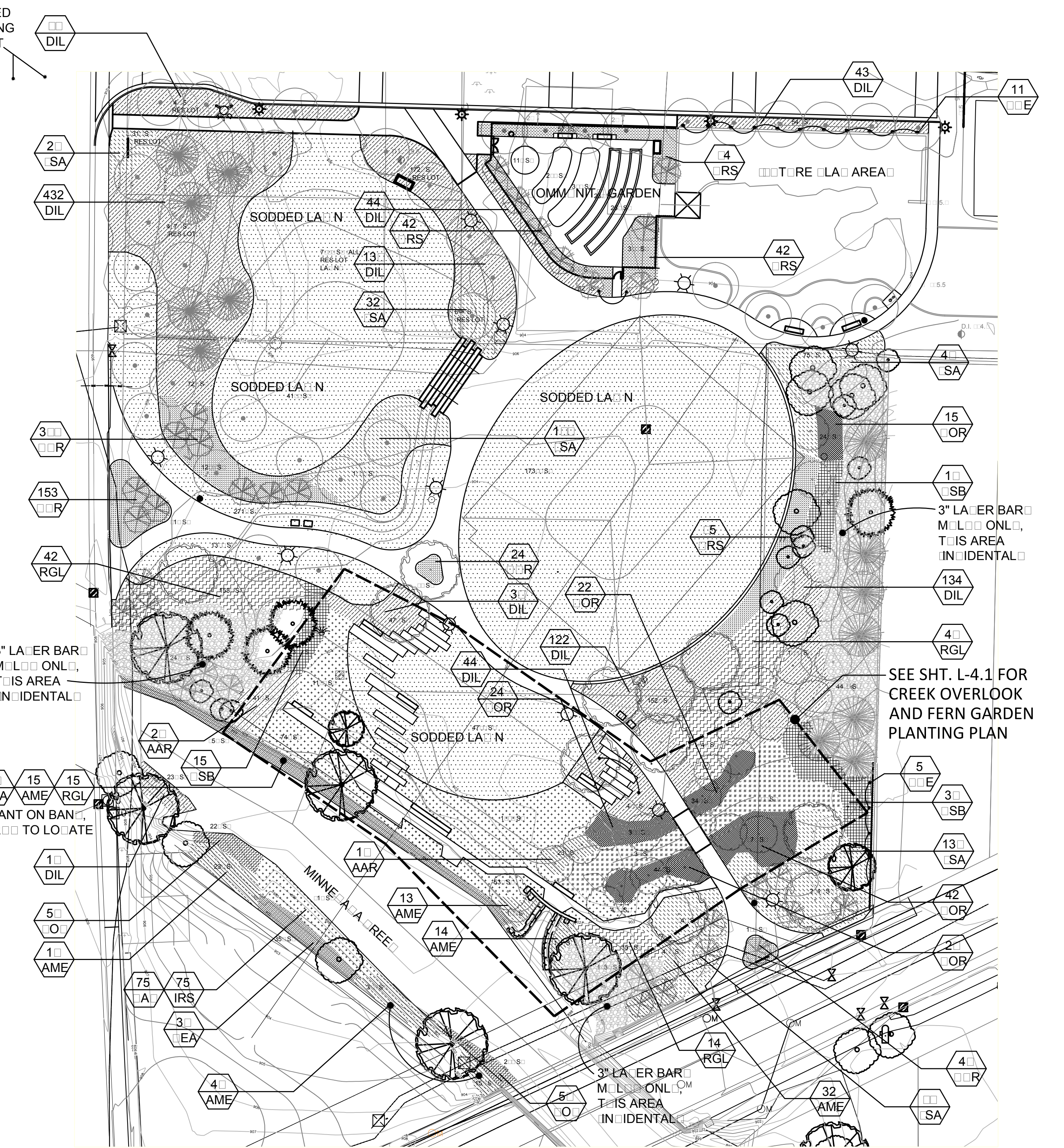
PROJECT #: 10-032  
 DRAWN BY: JAL  
 CHECKED BY: RSA

DRAWING NO.: **L3.0**



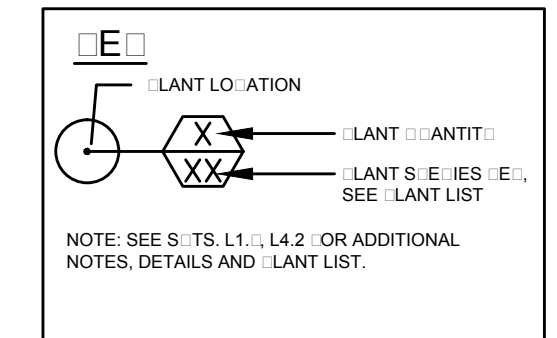


1 L4.0 TREE PLANTING PLAN

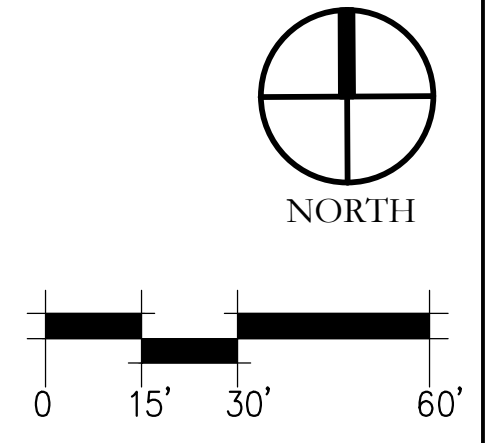
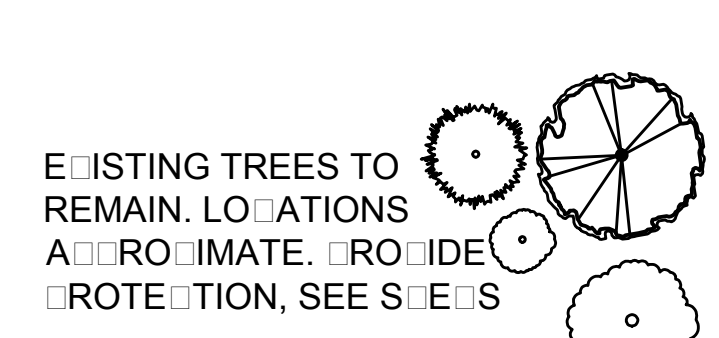


2 L4.0 SHRUB/GROUNDCOVER PLANTING PLAN

PLANTING LEGEND NOTES



1. FURNISH AND INSTALL WOOD MULCH IN ALL PLANTING BEDS. SEE SPECS.
2. FURNISH AND INSTALL STEEL EDGER BETWEEN LAWN OR ROCK MULCH AND PLANTING BEDS. SEE SPECS AND SHEET L3.0.
3. CALL GOPHER STATE ONE CALL FOR UTILITY LOCATES PRIOR TO ALL EXCAVATION WORK.
4. NOTIFY ARCHITECT OF UTILITY OR OTHER CONFLICTS THAT REQUIRE ALTERATIONS TO THE PLAN.
5. PROTECT AND MAINTAIN EXISTING PLANTINGS THAT ARE TO REMAIN.
6. REMOVE ANY SOIL FROM TOP OF ROOT BALL, ALL PLANTS. TO EXPOSE FIRST ROOT. SET FIRST ROOT AT OR ABOVE ADJACENT SOIL LEVEL.
7. RESET ANY PLANTS THAT HAVE SETTLED AFTER INSTALLATION WHERE ROOT CROWN OF PLANT IS BELOW SURROUNDING GRADE.
8. WHERE MORE THAN ONE PLANT TYPE IS INDICATED, ARCHITECT WILL FIELD LOCATE.



I hereby certify that this plan, specification, or supervision and I am a duly licensed Landscape Architect under the laws of the State of Minnesota.  
ROLAND S. ABERG License No. 47654 Date: 6/30/14

COTTAGEVILLE PARK  
PHASE 1  
Hopkins, Minnesota  
Minnehaha Creek Watershed District

SCALE: #####  
NOTE: THIS DRAWING IS TO BE USED FOR NOT SCALE DRAWINGS. USE FIELD DIMENSIONS ONLY. FOR MEASUREMENTS FROM ARCHITECT'S FOR MEASUREMENTS THAT ARE NOT INDICATED.

DATE	ISSUE
XX/XX/14	BID ISSUE

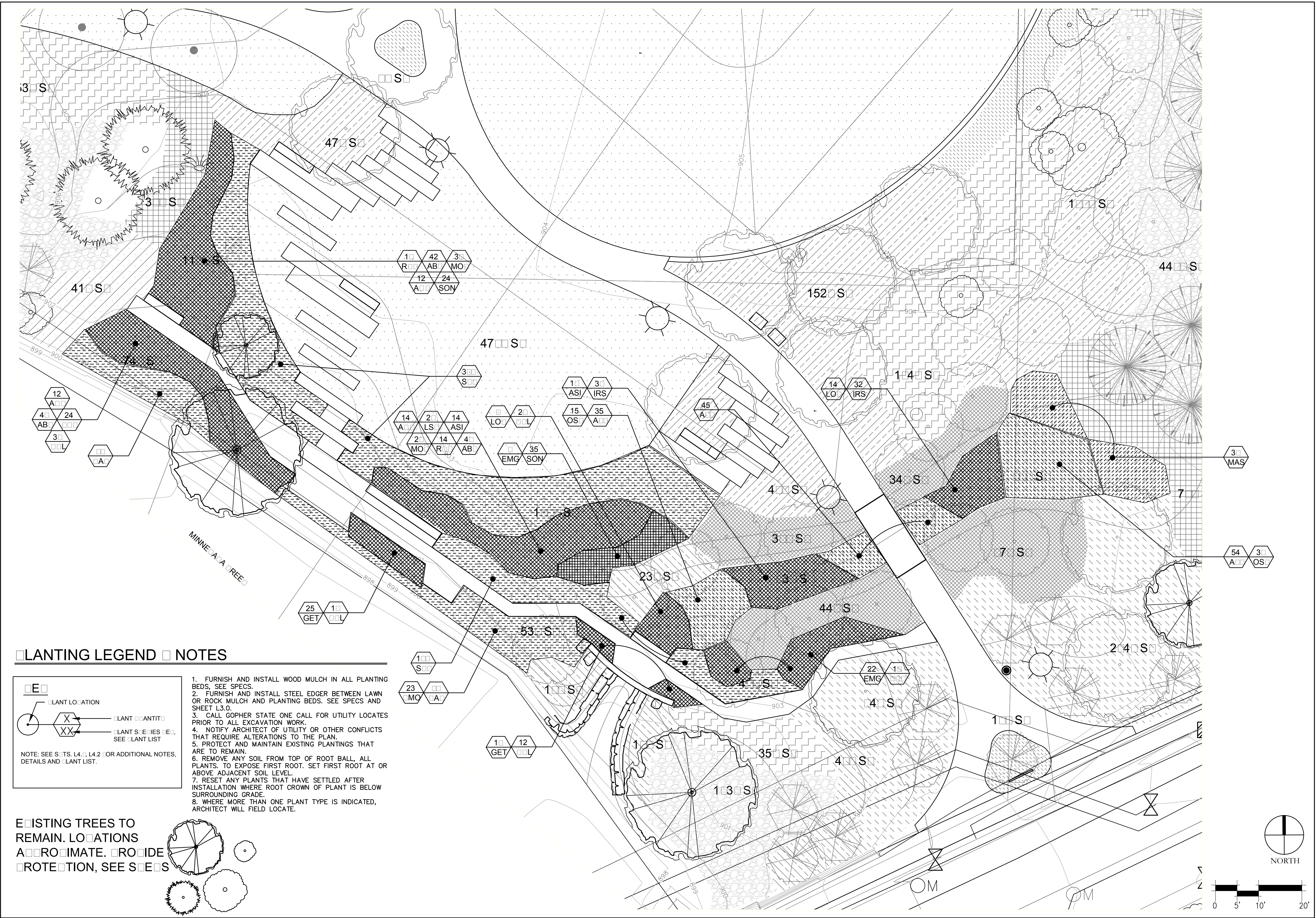
REVISIONS		
NO.	DATE	ISSUE

DRAWING TITLE:  
SITE PLANTING PLAN

PROJECT #: 10-032  
DRAWN BY: JAL  
CHECKED BY: RSA

DRAWING NO.: L4.0





**LANTING LEGEND NOTES**

**EXISTING TREES TO REMAIN. LOCATIONS**

A **RO** IMATE. **RO** IDE  
**RO** TE OTION, SEE SHEET **S**

NOTE: SEE SHEETS L4.1, L4.2 FOR ADDITIONAL NOTES, DETAILS AND PLANT LIST.

- FURNISH AND INSTALL WOOD MULCH IN ALL PLANTING BEDS, SEE SPECS.
- FURNISH AND INSTALL STEEL EDGER BETWEEN LAWN OR ROCK MULCH AND PLANTING BEDS. SEE SPECS AND SHEET L3.0.
- CALL GOPHER STATE ONE CALL FOR UTILITY LOCATES PRIOR TO ALL EXCAVATION WORK.
- NOTIFY ARCHITECT OF UTILITY OR OTHER CONFLICTS THAT REQUIRE ALTERATIONS TO THE PLAN.
- PROTECT AND MAINTAIN EXISTING PLANTINGS THAT ARE TO REMAIN.
- REMOVE ANY SOIL FROM TOP OF ROOT BALL, ALL PLANTS, TO EXPOSE FIRST ROOT. SET FIRST ROOT AT OR ABOVE ADJACENT SOIL LEVEL.
- RESET ANY PLANTS THAT HAVE SETTLED AFTER INSTALLATION WHERE ROOT CROWN OF PLANT IS BELOW SURROUNDING GRADE.
- WHERE MORE THAN ONE PLANT TYPE IS INDICATED, ARCHITECT WILL FIELD LOCATE.

**COTTAGEVILLE PARK PHASE 1**

Hopkins, Minnesota  
 Minnehaha Creek Watershed District

SCALE: #####  
 NOTE: THIS DRAWING IS TO BE USED FOR INFORMATION ONLY. SCALE DIMENSIONS, UNLESS OTHERWISE SPECIFIED, ARE FOR INFORMATION ONLY. ARCHITECT'S FIELD MEASUREMENTS SHALL BE USED FOR CONSTRUCTION.

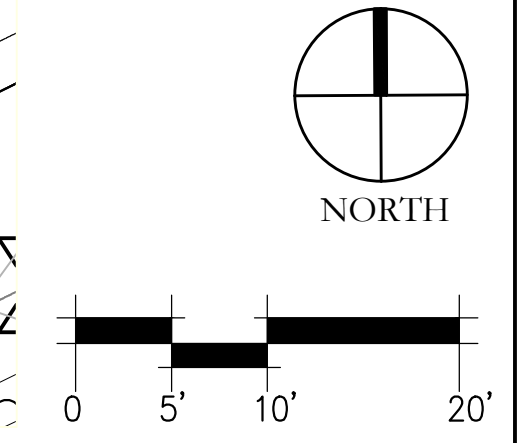
DATE	ISSUE
6/30/14	BID ISSUE

REVISIONS		
NO.	DATE	ISSUE

DRAWING TITLE:  
**DETAILED PLANTING PLAN**

PROJECT #:  
 10-032  
 DRAWN BY:  
 JAL  
 CHECKED BY:  
 RSA

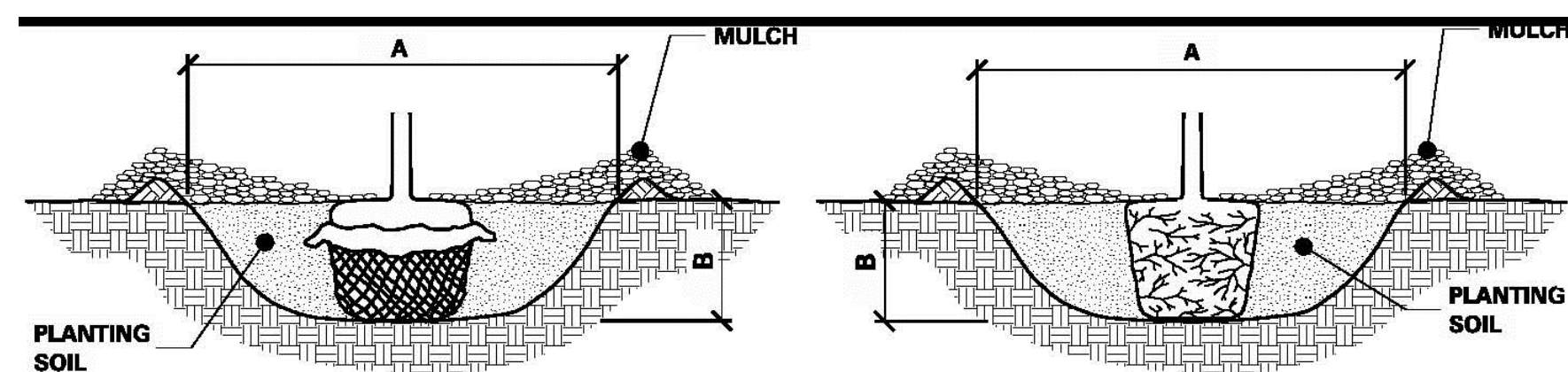
DRAWING NO:  
**L4.1**



# PLANT LIST

KEY	BOTANICAL NAME	COMMON NAME	QUANT.	SIZE	COMMENTS
<b>TREES</b>					
AMG	AMELANCHIER X. G. "AUTUMN BRILLIANCE"	SERVICEBERRY	11	8 FT HT	B&B CLUMP FORM, ARCH TO TAG
MHD	MALUS "HONEYCRISP DWARF"	HONEYCRISP APPLE	1	#10 CONT.	B&B STANDARD, UPRIGHT TREE, ARCH TO TAG
MRJ	MALUS "JEWELCOLE"	RED JEWEL CRABAPPLE	13	2 IN CAL.	B&B STANDARD, UPRIGHT TREE, ARCH TO TAG
MSS	MALUS "SPRING SNOW"	SPRING SNOW CRABAPPLE	6	2 IN CAL.	B&B STANDARD, UPRIGHT TREE, ARCH TO TAG
PIS	PINUS STROBUS	WHITE PINE	13	8 FT HT	B&B EVERGREEN TREE, FULL FORM, ARCH TO TAG
PTR	POPULUS TREMULOIDES	QUAKING ASPEN	25	2 IN CAL.	B&B STANDARD, LOW BRANCHING TREE, ARCH TO TAG
PBA	PRUNUS "BALI"	BALI CHERRY	2	#10 CONT.	B&B STANDARD, UPRIGHT TREE, ARCH TO TAG
QUM	QUERCUS MACROCARPA	BUR OAK	11	3 IN CAL.	B&B STANDARD, UPRIGHT TREE, ARCH TO TAG
TAM	TILIA A. "MCKSENTRY"	SENTRY LINDEN	35	3 IN CAL.	B&B STANDARD, UPRIGHT TREE, ARCH TO TAG
VPR	VIBURNUM PRUNIFOLIUM	BLACKHAW TREE FORM	6	#10 CONT.	B&B CLUMP FORM, ARCH TO TAG
<b>SHRUBS-EVERGREEN</b>					
JSA	JUNIPERUS S. "ARCADIA"	ARCADIA JUNIPER	390	#2 CONT.	48 IN O.C., FULL FORM, FULLY ROOTED
<b>SHRUBS-DECIDUOUS</b>					
AAR	AMELANCHIER A. "REGENT"	REGENT SERVICEBERRY	44	#5 CONT.	48 IN O.C., FULL FORM, FULLY ROOTED
AME	ARONIA MELANOCARPA "AUTUMN MAGIC"	BLACK CHOKEBERRY	132	#5 CONT.	42 IN O.C., FULL FORM, FULLY ROOTED
CEA	CEANOTHUS AMERICANUS	NEW JERSEY TEA	68	#1 CONT.	FULL FORM, FULLY ROOTED. ARCH TO SPOT IN FIELD
COR	CORNUS A. S. "REGNZAM"	RED GNOME DOGWOOD	131	#5 CONT.	48 IN O.C., FULL FORM, FULLY ROOTED
CSB	CORNUS SERICEA "BUD'S YELLOW"	BUD'S YELLOW DOGWOOD	61	#5 CONT.	60 IN O.C., FULL FORM, FULLY ROOTED
DIL	DIERVILLA LONICERA	DWARF BUSH HONEYSUCKLE	1081	#5 CONT.	42 IN O.C., FULL FORM, FULLY ROOTED
RGL	RHUS A. "GRO-LO"	GRO-LO SUMAC	117	#2 CONT.	72 IN O.C., FULL FORM, FULLY ROOTED
<b>FERNS</b>					
AFF	ATHYRIUM FELIX-FEMINA	LADY FERN	134	#1 CONT.	24 IN. O.C. FULL FORM, FULLY ROOTED
MAS	MATTEUCCIA STRUTHIOPERIS	OSTRICH FERN	38	#1 CONT.	36 IN. O.C. FULL FORM, FULLY ROOTED
OSC	OSMUNDA CLAYTONIANA	INTERRUPTED FERN	51	#1 CONT.	24 IN. O.C. FULL FORM, FULLY ROOTED
<b>GRASSES</b>					
CAV	CAREX VULPINOIDES	FOX SEDGE	215	#1 CONT.	24 IN. O.C. FULL FORM, FULLY ROOTED
CMO	CAREX M. "OEHME"	OEHME SEDGE	23	#1 CONT.	24 IN. O.C. FULL FORM, FULLY ROOTED
SON	SORGHASTRUM NUTANS	INDIAN GRASS	59	#1 CONT.	24 IN. O.C. FULL FORM, FULLY ROOTED
SPH	SPOROBOLUS HETEROLEPIS	PRAIRIE DROPSEED	488	#1 CONT.	24 IN. O.C. FULL FORM, FULLY ROOTED
<b>PERENNIAL FLOWERS</b>					
ABF	AGASTACHE F. "BLUE FORTUNE"	WILD HYSSOP	140	#1 CONT.	24 IN. O.C. FULL FORM, FULLY ROOTED
AQC	AQUILEGIA CANADENSIS	COLUMBINE	38	4" CONT.	24 IN. O.C. FULL FORM, FULLY ROOTED
ASI	ASCLEPIAS INCARNATA	MARSH MILKWEED	32	4" CONT.	24 IN. O.C. FULL FORM, FULLY ROOTED
CHL	CHELONE "HOT LIPS"	TURTLEHEAD	86	#1 CONT.	24 IN. O.C. FULL FORM, FULLY ROOTED
EMG	EUPATORIUM M. "GATEWAY"	JOE PYE WEED	30	#1 CONT.	36 IN. O.C. FULL FORM, FULLY ROOTED
GET	GEUM T. "PRAIRIE SMOKE"	GEUM	41	#1 CONT.	12 IN. O.C. FULL FORM, FULLY ROOTED
HHR	HEMEROCALLIS "HAPPY RETURNS"	DAY LILY	517	#1 CONT.	18 IN. O.C. FULL FORM, FULLY ROOTED
HRS	HOSTA "ROYAL STANDARD"	HOSTA	233	#1 CONT.	36 IN. O.C. FULL FORM, FULLY ROOTED
IRS	IRIS VERSICOLOR	BLUE FLAG IRIS	143	#1 CONT.	24 IN. O.C. FULL FORM, FULLY ROOTED
LOC	LOBELIA CARDINALIS	CARDINAL FLOWER	22	#1 CONT.	24 IN. O.C. FULL FORM, FULLY ROOTED
LSP	LIATRIS Pycnostachya	PRAIRIE BLAZING STAR	20	#1 CONT.	24 IN. O.C. FULL FORM, FULLY ROOTED
MOF	MONARDA FISTULOSA	WILD BERGAMOT	58	4" CONT.	SEED MIX TO BE DETERMINED
PHV	PHYSOTEGIA VIRGINIANA	OBEDIENT PLANT	40	4" CONT.	24 IN. O.C. FULL FORM, FULLY ROOTED
POC	PONTEDERIA CORDATA	PICKERELWEED	108	4" CONT.	24 IN. O.C. FULL FORM, FULLY ROOTED
RUH	RUDBECKIA HIRTA	BLACK-EYED SUSAN	32	#1 CONT.	24 IN. O.C. FULL FORM, FULLY ROOTED
PQE	PARTHENOCISSUS Q. "ENGELMANNI"	ENGELMANN IVY	16	#1 CONT.	FULL FORM, FULLY ROOTED, TRAIN TO FENCE

NOTE: IN THE EVENT OF CONFLICTS BETWEEN THE LIST AND THE PLAN, THE PLAN SHALL GOVERN  
 NOTE: PLANT MATERIAL SHALL CONFORM TO THE REQUIREMENTS OF THE SPECIFICATIONS, PLANS, NOTES AND DETAILS



- BALLED & BURLAPPED STOCK**
1. SCARIFY SIDES AND BOTTOM OF HOLE.
  2. PROCEED WITH CORRECTIVE PRUNING.
  3. SET PLANT ON UNDISTURBED NATIVE SOIL OR THOROUGHLY COMPACTED PLANTING SOIL. INSTALL PLANT SO THE ROOT FLARE IS AT OR UP TO 2" ABOVE THE FINISHED GRADE WITH BURLAP AND WIRE BASKET, (IF USED), INTACT.
  4. SLIT REMAINING TREATED BURLAP AT 6" INTERVALS.
  5. BACKFILL TO WITHIN APPROXIMATELY 12" OF THE TOP OF THE ROOTBALL, THEN WATER PLANT. REMOVE THE TOP 1/8 OF THE BASKET OR THE TOP TWO HORIZONTAL RINGS WHICHEVER IS GREATER. REMOVE ALL BURLAP AND NAILS FROM THE TOP 1/8 OF THE BALL. REMOVE ALL TWINE. REMOVE OR CORRECT STEM GIRDLING ROOTS.
  6. PLUMB AND BACKFILL WITH PLANTING SOIL.
  7. WATER THOROUGHLY WITHIN 2 HOURS TO SETTLE PLANTS AND FILL VOIDS.
  8. BACK FILL VOIDS AND WATER SECOND TIME.
  9. PLACE MULCH WITHIN 48 HOURS OF THE SECOND WATERING UNLESS SOIL MOISTURE IS EXCESSIVE.

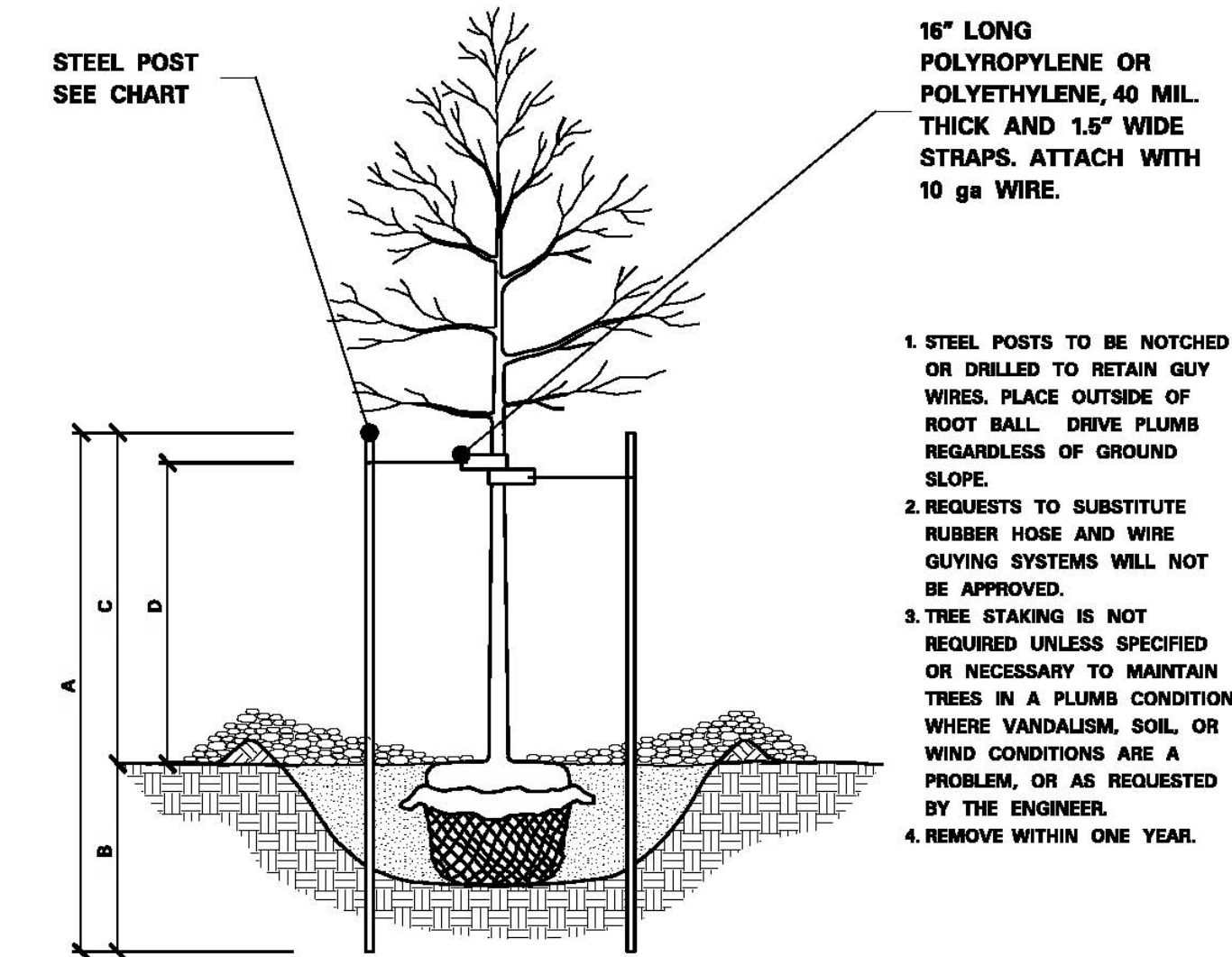
- CONTAINER STOCK**
1. SCARIFY SIDES AND BOTTOM OF HOLE.
  2. PROCEED WITH CORRECTIVE PRUNING OF TOP AND ROOT.
  3. REMOVE CONTAINER AND SCORE OUTSIDE OF SOIL MASS TO REDIRECT AND PREVENT CIRCLING FIBROUS ROOTS. REMOVE OR CORRECT STEM GIRDLING ROOTS.
  4. SET PLANT ON UNDISTURBED NATIVE SOIL OR THOROUGHLY COMPACTED PLANTING SOIL. INSTALL PLANT SO THE TOP OF THE ROOT FLARE IS AT OR UP TO 2" ABOVE THE FINISHED GRADE.
  5. PLUMB AND BACKFILL WITH PLANTING SOIL.
  6. WATER THOROUGHLY WITHIN 2 HOURS TO SETTLE PLANTS AND FILL VOIDS.
  7. BACK FILL VOIDS AND WATER SECOND TIME.
  8. PLACE MULCH WITHIN 48 HOURS OF THE SECOND WATERING UNLESS SOIL MOISTURE IS EXCESSIVE.

PLANTING HOLE DIMENSIONS			
HOLE DEPTH FOR B&B AND CONTAINER PLANTS SHALL NOT EXCEED MEASUREMENT FROM ROOT FLAIR TO BOTTOM OF SOIL BALL			
PLANT TYPE	PLANT SIZE UP TO AND INCLUDING	(A) MINIMUM HOLE WIDTH	(B) APPROXIMATE HOLE DEPTH (2)
<b>CONIFEROUS TREES</b> AT LEAST 2/3 OF ALL CONIFER BRANCHES WILL CONTAIN TERMINAL BUDS	(2") B.B.	(36")	(10")
	(3") B.B.	(42")	(11")
	(4") B.B.	(51")	(13")
	(5") B.B.	(60")	(15")
	(6") B.B.	(66")	(16")
	(7") B.B.	(72")	(18")
	(8") B.B.	(81")	(18")
	(9") B.B.	(90")	(20")
	(10") B.B.	(102")	(21")
	(12") B.B.	(114")	(24")
	(18") B.B.	(24")	(7")
	(3") B.B.	(48")	(12")
<b>CONIFEROUS SHRUBS (UPRIGHT)</b>	(18") SPR B.B.	(30")	(8")
	(2") SPR B.B.	(36")	(8")
<b>CONIFEROUS SHRUBS (SPREADING)</b>	CELLPACKS /PLUGS	(6")	(2.5")
	(2.25") CONT.	(7")	(3")
	(3.5") CONT.	(10")	(4")
	(4") CONT.	(11")	(4")
	(4.5") CONT.	(13")	(4")
	(8" /1 QT.) CONT.	(15")	(5.5")
	(#1) CONT.	(18")	(6")
	(#2) CONT.	(23")	(7.5")
	(#3) CONT.	(29")	(8.5")
	(#5) CONT.	(30")	(11")
	(#7) CONT.	(37")	(11")
	(#15) CONT.	(44")	(14")
<b>SEEDLINGS</b>	(#10) CONT.	(45")	(15")
	(#20) CONT.	(60")	(16")
	(#25) CONT.	(72")	(17")
	(6") SEEDLING	(15")	(14")
	(9") SEEDLING	(18")	(14")
	(12") SEEDLING	(23")	(16")
	(18") SEEDLING	(30")	(16")
	(2") SEEDLING	(36")	(18")
	1 YR. MED. B.R.	(15")	(11")
	1 YR. NO. 1 B.R.	(17")	(14")
	2 YR. MED. B.R.	(33")	(12")
	2 YR. NO. 1 B.R.	(42")	(15")

PLANTING HOLE DIMENSIONS			
HOLE DEPTH FOR B&B AND CONTAINER PLANTS SHALL NOT EXCEED MEASUREMENT FROM ROOT FLAIR TO BOTTOM OF SOIL BALL.			
PLANT TYPE	PLANT SIZE UP TO AND INCLUDING	(A) MINIMUM HOLE WIDTH	(B) APPROXIMATE HOLE DEPTH (2)
<b>DECIDUOUS &amp; ORNAMENTAL TREES</b>	(3") B.R.	(48")	(13")
	(4") B.R.	(48")	(14")
	(5") B.R.	(48")	(14")
	(6") B.R.	(54")	(15")
	(7") B.R.	(60")	(16")
	(8") B.R.	(66")	(16")
	(10.75") B.R.	(48")	(12")
	(1") B.R.	(54")	(14")
	(1.25") B.R.	(60")	(14")
	(1.5") B.R.	(66")	(15")
	(1.75") B.R.	(72")	(16")
	(2") B.R.	(84")	(19")
	(4") B.B.	(42")	(17")
	(5") B.B.	(48")	(12")
	(6") B.B.	(54")	(14")
	(8") B.B.	(56")	(16")
	(10") B.B.	(66")	(16")
	(12") B.B.	(66")	(16")
	(1") B.B.	(48")	(14")
	(1.25") B.B.	(56")	(15")
	(1.5") B.B.	(61")	(15")
	(1.75") B.B.	(66")	(16")
	(2") B.B.	(72")	(16")
	(2.5") B.B.	(84")	(19")
	(3") B.B.	(96")	(20")
	(3.5") B.B.	(114")	(23")
	(4") B.B.	(126")	(26")
	(12") B.R.	(24")	(7")
(15") B.R.	(28")	(8")	
(18") B.R.	(30")	(8")	
(2") B.R.	(32")	(9")	
(3") B.R.	(42")	(11")	
(4") B.R.	(48")	(12")	
(5") B.R.	(54")	(14")	
(6") B.R.	(60")	(14")	
(18") B.B.	(27")	(7")	
(2") B.B.	(30")	(8")	
(3") B.B.	(36")	(9")	
(4") B.B.	(42")	(11")	
(5") B.B.	(48")	(12")	
(6") B.B.	(54")	(14")	

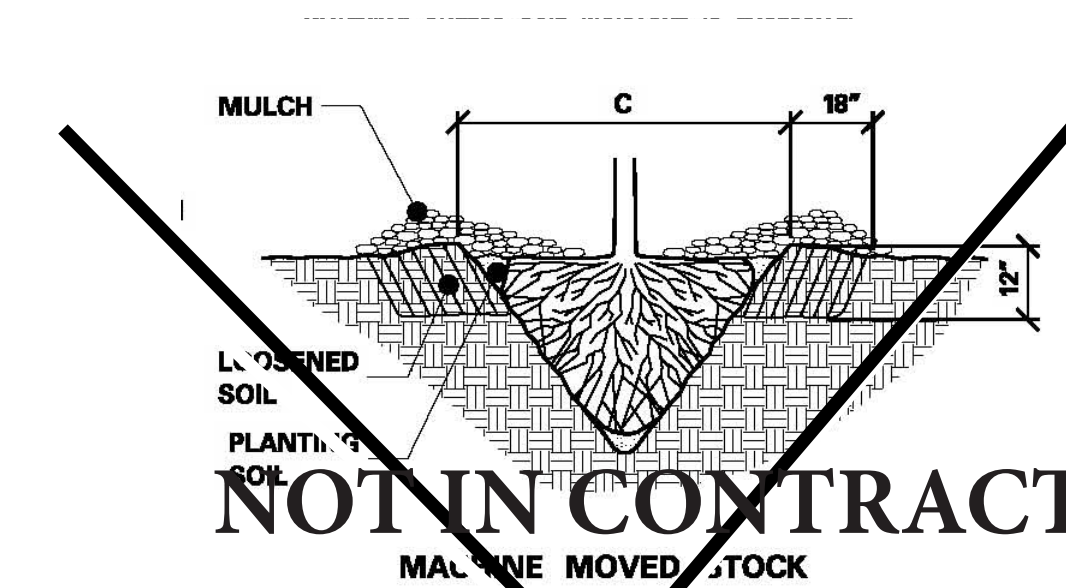
**DECIDUOUS SHRUBS, ROSES AND PERENNIALS**

PERENNIAL HOLE DEPTH AND WIDTH SHALL BE BASED UPON ON-CENTER SPACING IN A CONTINUOUS TRENCH.



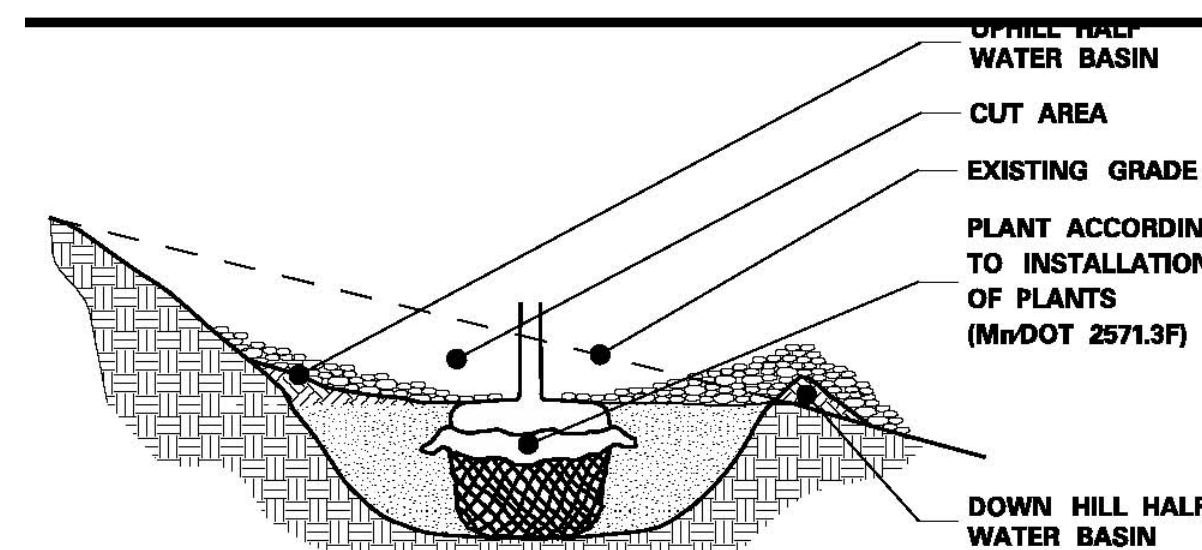
STEEL POST SIZING					
CALIPER	STEEL POST TYPE	A	B	C	D
LESS THEN 4 INCHES	ROLLED STEEL FENCE POST (MnDOT 3403) OR APPROVED EQUAL.	7'-0"	3'-0" MIN.	4'-0"	3'-0"
GREATER THEN 4 INCHES	10", 2.2 LB. FLANGED CHANNEL STEEL SIGN POST (MnDOT 3401) OR APPROVED EQUAL.	10'-0"	4'-0" MIN.	8'-0"	5'-0"

**STAKING AND GUYING**  
 USE THREE POSTS FOR EVERGREEN TREES.



1. SCARIFY SIDES AND BOTTOM OF HOLE.
2. PROCEED WITH CORRECTIVE PRUNING.
3. SET PLANT ON NATIVE SOIL AT SAME DEPTH AS IT WAS PREVIOUSLY GROWN.
4. PLUMB AND BACKFILL WITH PLANTING SOIL.
5. AFTER PLANTING, USE THE SOIL IMMEDIATELY ADJACENT TO THE SPADE-MOVED SOIL TO A MINIMUM DISTANCE OF 12" AND A MINIMUM DEPTH OF 12".
6. WATER THOROUGHLY WITHIN 2 HOURS TO SETTLE PLANTS AND FILL VOIDS.
7. BACK FILL VOIDS AND WATER SECOND TIME.
8. PLACE MULCH WITHIN 48 HOURS OF THE SECOND WATERING UNLESS SOIL MOISTURE IS EXCESSIVE.

MINIMUM TREE SPADE SIZE REQUIREMENTS			
TRUNK DIAMETER SIZE 'C'	OAK TREE, CALIPER	DECIDUOUS/ ORNAMENTAL TREE, CALIPER	CONIFEROUS TREE, HEIGHT
42"	1" to 1.5"	2" to 3"	5' to 7'
60"	1.5" to 2.5"	3" to 4"	7' to 8'
78"	2.5" to 3.5"	4" to 6"	8' to 14'
85"	3.5" to 5"	6" to 8"	14' to 18'



NOTE:  
 1. ON 1:2 SLOPES OR GREATER, DO NOT CONSTRUCT THE UPHILL HALF OF THE WATERING BASIN.

**PLANTING ON STEEP SLOPES**

SCALE: #####  
 NOTE: THIS DRAWING IS 25% SCALED. DO NOT SCALE DRAWINGS. USE FIGURED DIMENSIONS ONLY. NO FIELD CALCULATION FROM ARCHITECT FOR MEASUREMENTS THAT ARE NOT INDICATED.

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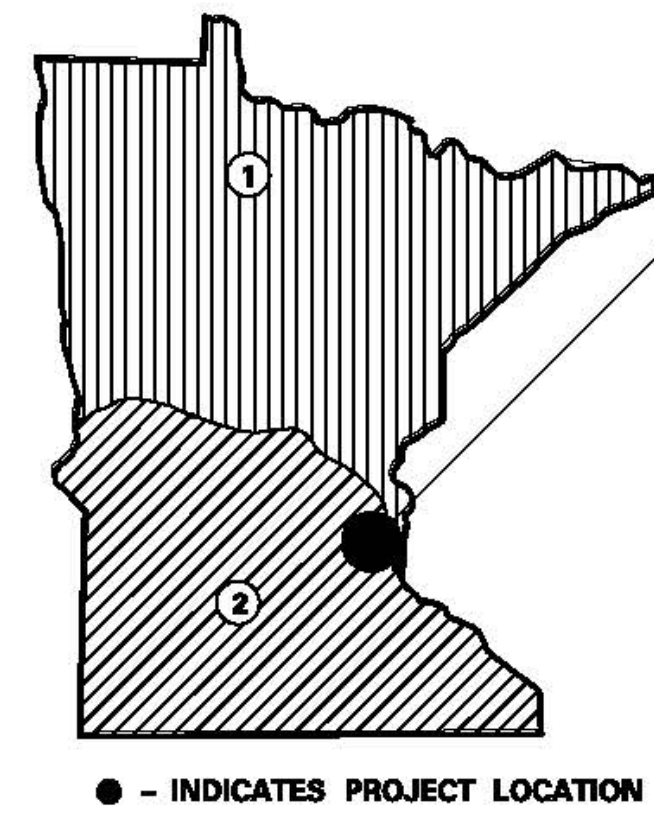
DRAWING TITLE:  
**PLANT LIST AND PLANTING DETAILS**

PROJECT #:  
 10-032  
 DRAWN BY:  
 JAL  
 CHECKED BY:  
 RSA

DRAWING NO:  
**L4.2**

# GENERAL NOTES

SEE SPECIAL PROVISIONS FOR SPECIFIC PROJECT REQUIREMENTS.		
REFER TO MnDOT SPECIFICATIONS 2571, 3861, THE "2009 INSPECTION AND CONTRACT ADMINISTRATION MANUAL FOR MnDOT LANDSCAPE PROJECTS" FOR GENERAL REQUIREMENTS.		
COMPLETE PREPARATORY WORK BEFORE STARTING INITIAL PLANTING OPERATIONS.		
ACCEPT ALL PLANT STOCK IN ACCORDANCE WITH MnDOT 3861 PRIOR TO PLANTING.		
THE CONTRACTOR WILL DEMONSTRATE COMPETENCY FOR SOIL CULTIVATION OPERATIONS AS CALLED FOR IN (MnDOT2571.3D2 (STEP 4))		
THE CONTRACTOR WILL DEMONSTRATE COMPETENCY FOR ALL PLANT INSTALLATION OPERATIONS AS CALL FOR IN (MnDOT2571.3F1a)		
RODENT PROTECTION	SEE SPECIAL PROVISIONS	
FERTILIZER	SEE SPECIAL PROVISIONS	
COMPOST	MnDOT 3890 TYPE 2 UNLESS OTHERWISE SPECIFIED.	
MULCH MATERIAL	MnDOT 3882 TYPE 6 UNLESS OTHERWISE SPECIFIED.	
MASS PLANTING BEDS	PREPARE MASS PLANTING BEDS FOR PLANTS PLACED AT 36" OR LESS, UNLESS OTHERWISE SPECIFIED ON SHEETS.	
TREE PAINTING (FROST CRACK PREVENTION)	PAINT OAKS, LINDENS, LOCUSTS, MAPLES, CRABAPPLES AND MOUNTAIN ASH. ONLY UNDILUTED EXTERIOR WHITE LATEX PAINT IS ACCEPTABLE. PAINT TREE CIRCUMFERENCE FROM GROUND LINE TO FIRST MAJOR BRANCH.	
PLANTING PLAN DIMENSIONS	STATED DIMENSIONS SUPERCEDE SCALING FROM PLAN.	
WATERING GUIDELINES (MnDOT 2571.G)	PLANT TYPE	AVERAGE GALLONS OF WATER PER APPLICATION PER PLANT
	MACHINE TRANSPLANTED TREES 42" AND UP	50-100
	BALLED & BURLAPPED TREES	20
	BARE ROOT TREES	15
	BALLED & BURLAPPED SHRUBS	10
	BARE ROOT OR CONTAINER SHRUBS	7
	WOODY SEEDLINGS	4
PERENNIALS AND VINES	3	
IT IS THE CONTRACTOR'S RESPONSIBILITY TO MONITOR AND MAINTAIN SOIL MOISTURE AT ADEQUATE BUT NOT EXCESSIVE LEVELS. THE AMOUNTS LISTED ABOVE ARE GUIDELINES, NOT REQUIREMENTS.		

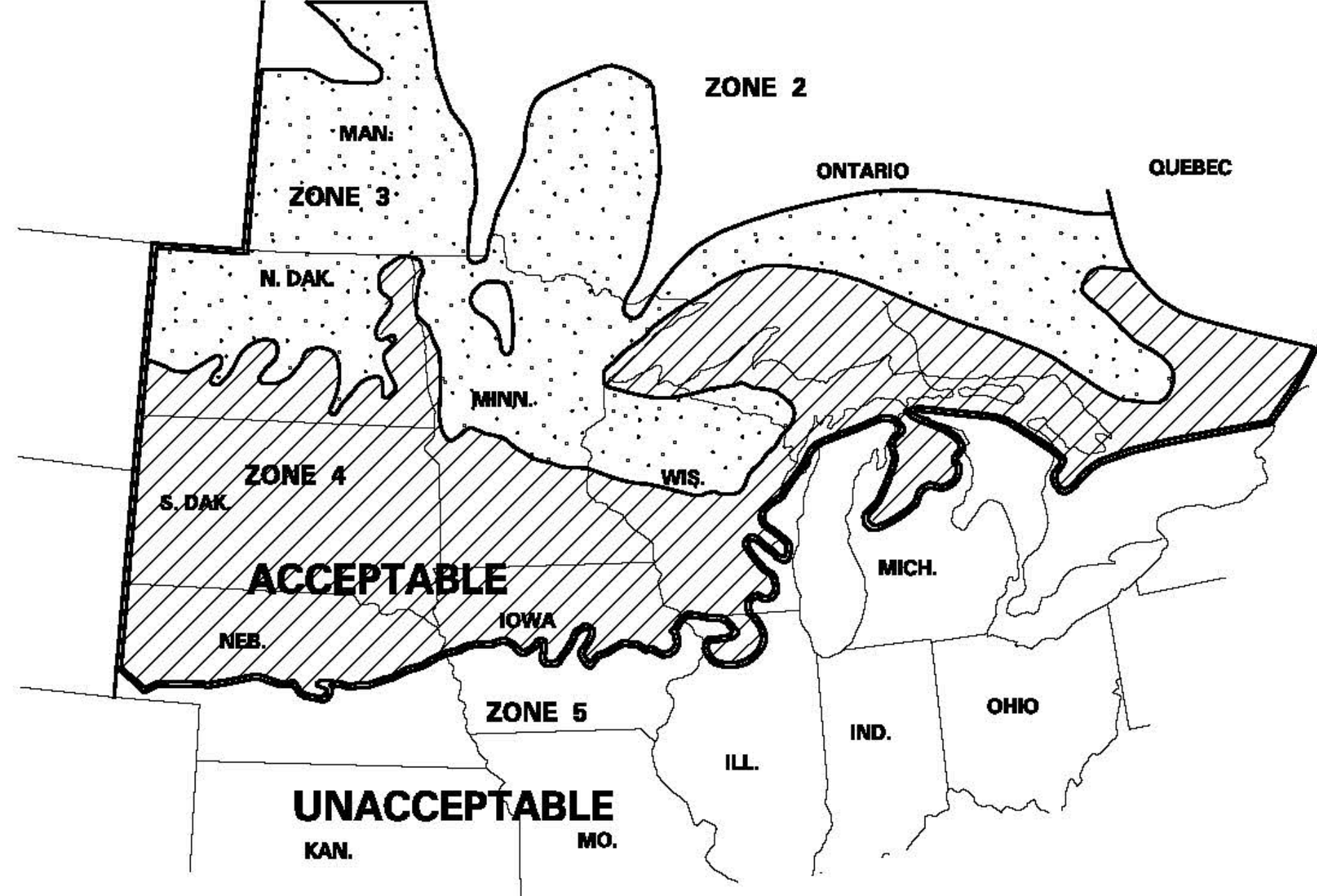


- BARE ROOT PERENNIALS MUST BE INSTALLED IN THE SPRING NO LATER THAN JUNE 1ST OR FOLLOW THE FALL DECIDUOUS PLANTING DATES.
- ACTUAL DATES MAY CHANGE DEPENDING UPON SEASONAL CONDITIONS, AS DETERMINED BY THE ENGINEER.
- FALL PLANTING IS NOT ALLOWED FOR BARE ROOT FORM OF THE FOLLOWING SPECIES: HAWTHORN, DOGWOOD, POPLAR, HACKBERRY, LINDEN, IRONWOOD, HONEYLOCUST, BIRCH, MOUNTAIN ASH, MAPLE, WILLOW, CRABAPPLE, PLUMCHERRY, OAKS, AND SUMAC.
- ALL REPLACEMENT PLANTS MUST BE INSTALLED DURING THE MONTH OF MAY DURING THE FIRST YEAR OF THE PLANT ESTABLISHMENT PERIOD.

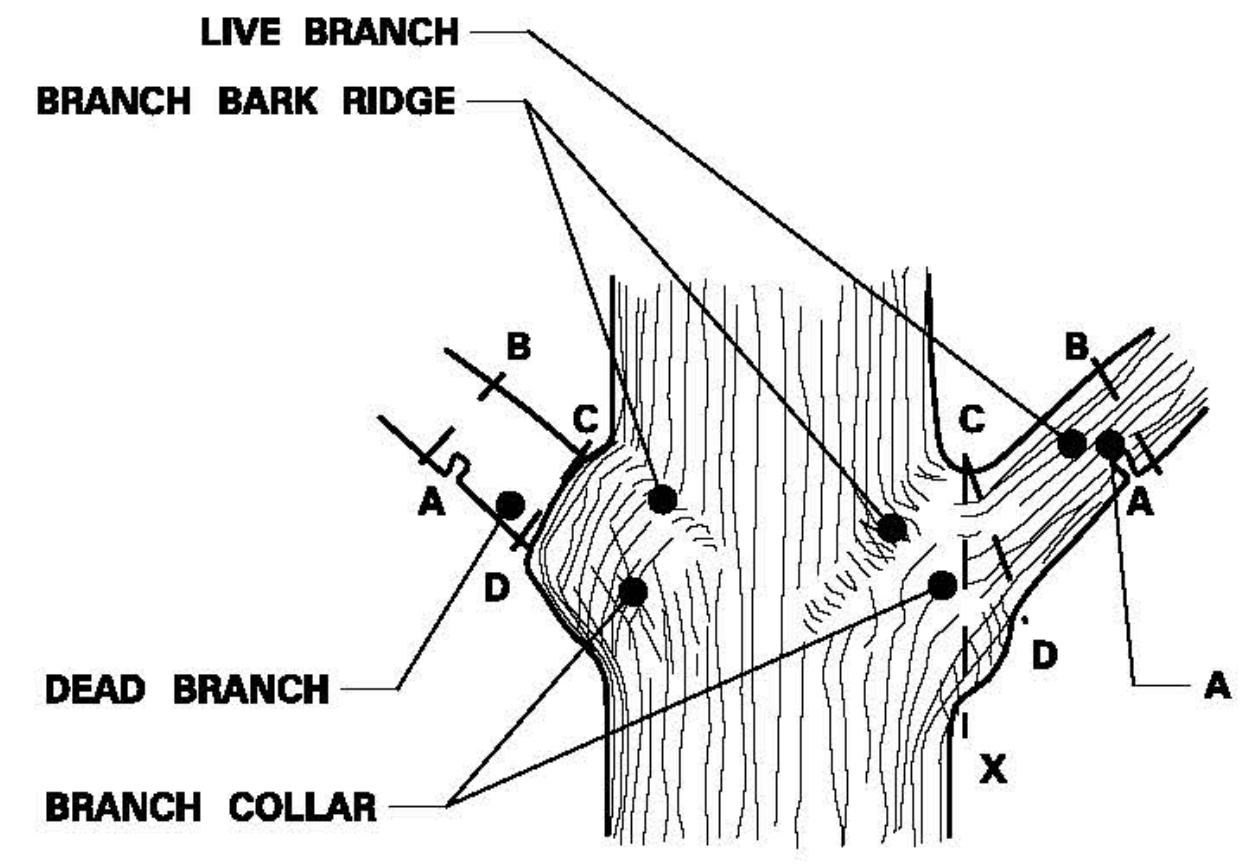
PLANTING DATE BY ZONES*						
KEY	SPRING				FALL	
	DECIDUOUS	CONIFEROUS	PERENNIALS	SEEDLINGS	DECIDUOUS	CONIFEROUS
①	APRIL 21 TO JUNE 1	APRIL 21 TO JUNE 1	MAY 1 TO JUNE 15	APRIL 21 TO JUNE 1	OCT. 1 TO NOV. 1	AUG. 25 TO SEPT. 15
②	APRIL 7 TO JUNE 1	APRIL 7 TO MAY 17	MAY 1 TO JUNE 15	APRIL 7 TO MAY 17	OCT. 10 TO NOV. 15	AUG. 25 TO SEPT. 15

\*OR AS DIRECTED BY ARCHITECT.

### PLANT INSTALLATION PERIOD



ACCEPTABLE PLANT STOCK GROWING RANGE LIMITS  
SOURCE: USDA PLANT HARDINESS ZONE MAP



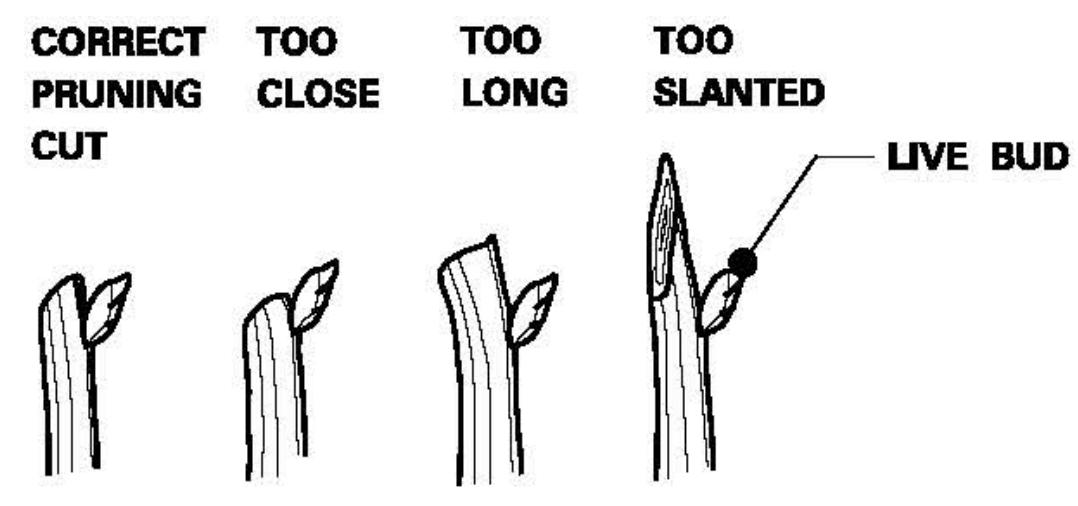
### BRANCHES PRUNED AT TRUNK (SHIGO METHOD)

INCORRECT CUT (TOO CLOSE) WILL RESULT IN DISCONTINUOUS CALLUS FORMATION AFTER ONE SEASON OF GROWTH.

CORRECT CUT (LEAVING BRANCH COLLAR BUT NO STUB) WILL RESULT IN CONTINUOUS DOUGHNUT SHAPED CALLUS FORMATION AFTER ONE SEASON OF GROWTH.

- STEPS TO PRUNING WITH PRUNING SAW
- CUT PART WAY THROUGH THE BRANCH AT POINT A.
  - CUT COMPLETELY THROUGH BRANCH FROM POINT B TO A.
  - CUT FROM POINT C TO D.
  - LEAVE BRANCH COLLAR (C TO D)
  - DO NOT FLUSH CUT (C TO X)
  - DO NOT LEAVE STUBS (B TO A)

- PRUNING NOTES
- PRUNE USING CLEAN AND SHARP SISSOR TYPE PRUNER OR PRUNING SAW.
  - THE BEST TIME TO PRUNE IS LATE DORMANT SEASON OR EARLY SPRING.
  - AVOID PRUNING OAKS IN APRIL, MAY, JUNE OR JULY.
  - IF PRUNING IS NECESSARY OR IF WOUNDS OCCUR TO OAK TREES IN APRIL, MAY, JUNE OR JULY, IMMEDIATELY PAINT CUT SURFACE OR WOUND WITH LATEX PAINT OR SHELLAC.



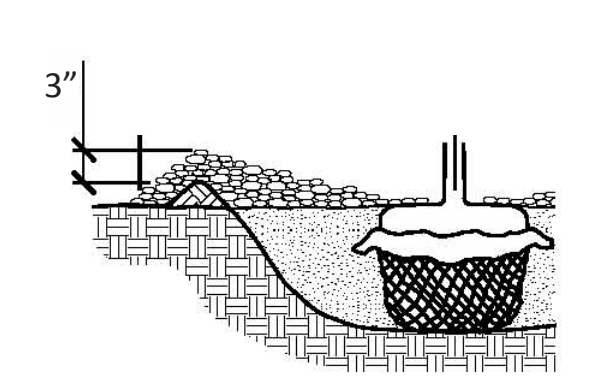
### BRANCHES PRUNED TO LIVE BUD

### PRUNING

ZONE MAP		
ZONES	LEGEND	APPROXIMATE MIN. TEMP.
2	[Pattern]	-40° TO -50° F
3	[Pattern]	-30° TO -40° F
4	[Pattern]	-20° TO -30° F

- FOR ALL PLANT STOCK, DOCUMENT ACCEPTABILITY FOR HARDINESS IN THE MINNESOTA ZONE WHERE THE PROJECT SITE IS LOCATED, AS FOLLOWS:
- A. PLANT STOCK CONTINUOUSLY GROWN FOR AT LEAST THE LAST TWO YEARS WITHIN THE ACCEPTABLE LIMITS SHOWN.
- OR
- B. PLANT STOCK, GROWN OUTSIDE THE ACCEPTABLE GROWING RANGE LIMITS, HAVING THE SEED SOURCE OR ROOT AND GRAFT STOCK ORIGINATING FROM THE ACCEPTABLE LIMITS SHOWN.

MULCH PLACEMENT		
TYPE OF PLANT	A	B
	FROM CENTER OF PLANT TO OUTSIDE EDGE OF MULCH	DEPTH OF MULCH
CONIFEROUS TREES	3' MIN.	4"-6"
DECIDUOUS TREES	3' MIN.	4"-6"
CONIFEROUS SHRUBS	3' MIN.	4"-6"
DECIDUOUS SHRUBS	3' MIN.	4"-6"
VINES	2' MIN.	4"-6"
PERENNIALS	2' MIN.	3"-4"
MACHINE-TRANSPLANTED TREES	12" BEYOND EDGE OF HOLE	4"-6"



MULCH PLACEMENT

MULCH ALL AREAS NOT COVERED BY SOD, GRASS SEED, OR PAVING.

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and I am a duly licensed Landscape Architect under the laws of the State of Minnesota.  
ROLAND S. ABERG  
License No.: 47454  
Date: 6/30/14

COTTAGEVILLE PARK  
PHASE 1  
Hopkins, Minnesota  
Minnehaha Creek Watershed District

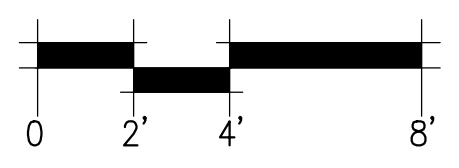
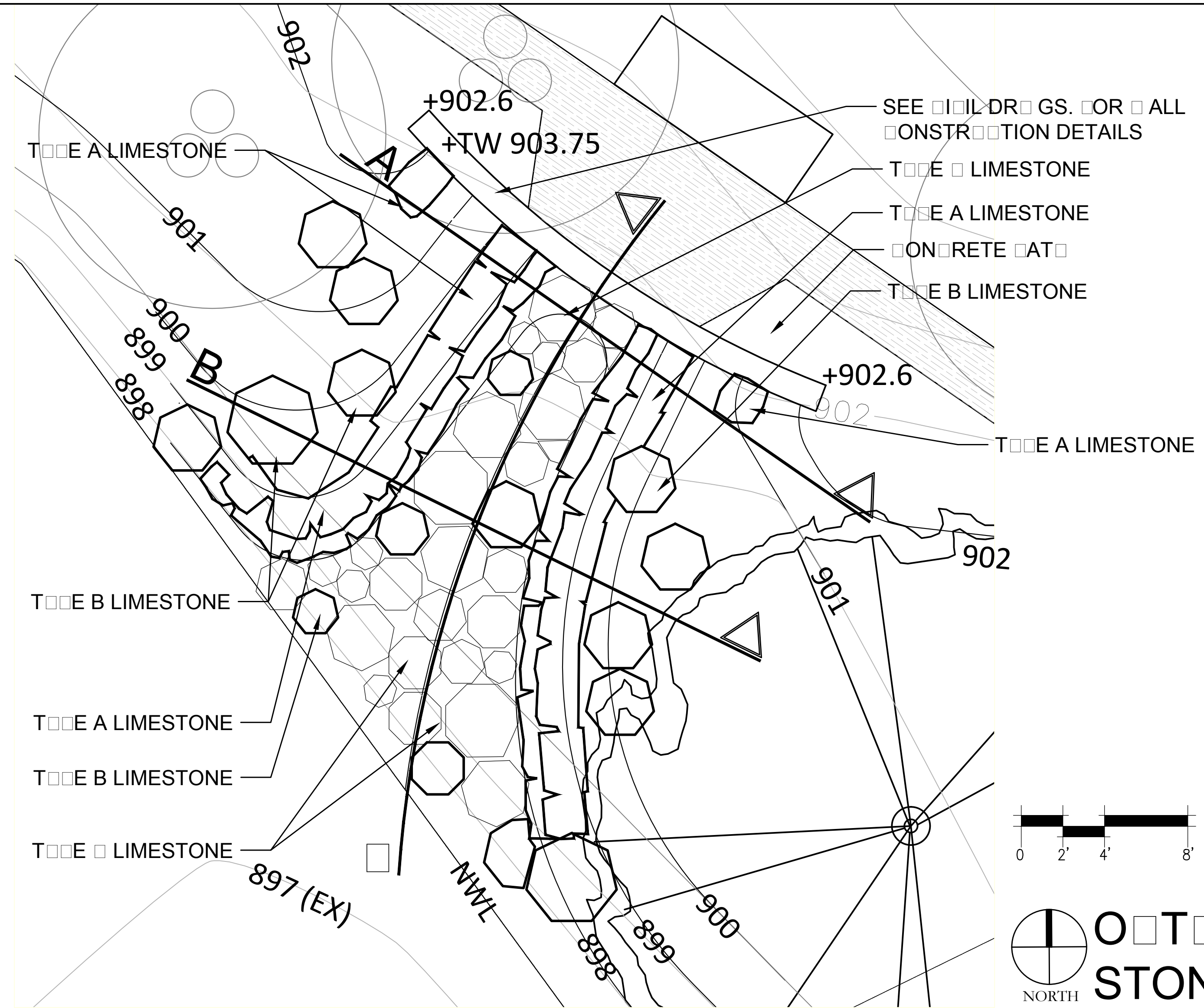
SCALE: ###

NOTE: THIS DRAWING IS 22"x34" DO NOT SCALE DRAWINGS. USE FIGURED DIMENSIONS ONLY FOR SEED CALCULATION FROM ARCHITECT FOR MEASUREMENTS THAT ARE NOT SHOWN.

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NO.	DATE	ISSUE

DRAWING TITLE:  
PLANTING DETAILS

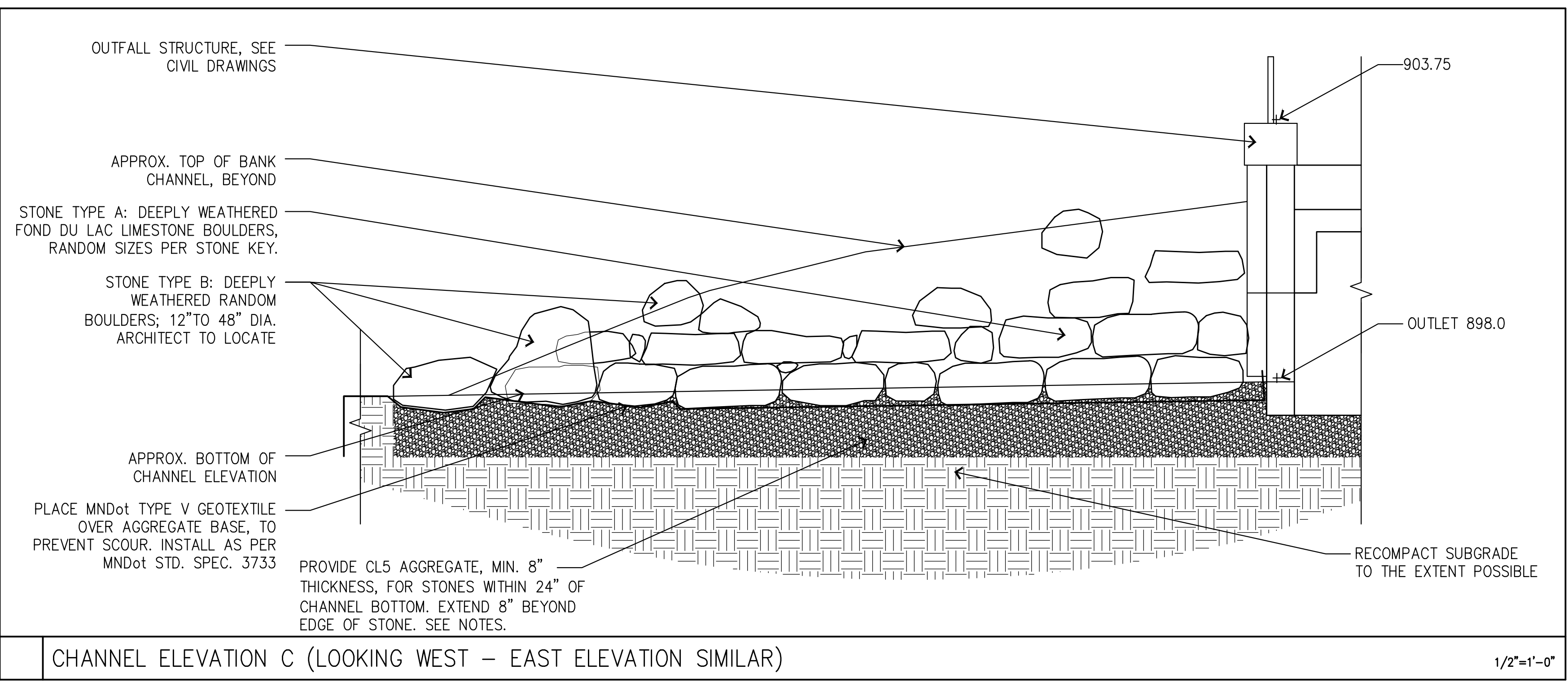


**OUTLINE PLAN  
STONE LAYOUT PLAN**

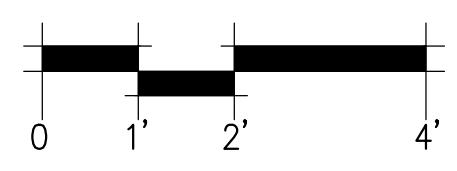
**STONE LAYOUT NOTES AND SCHEDULE**

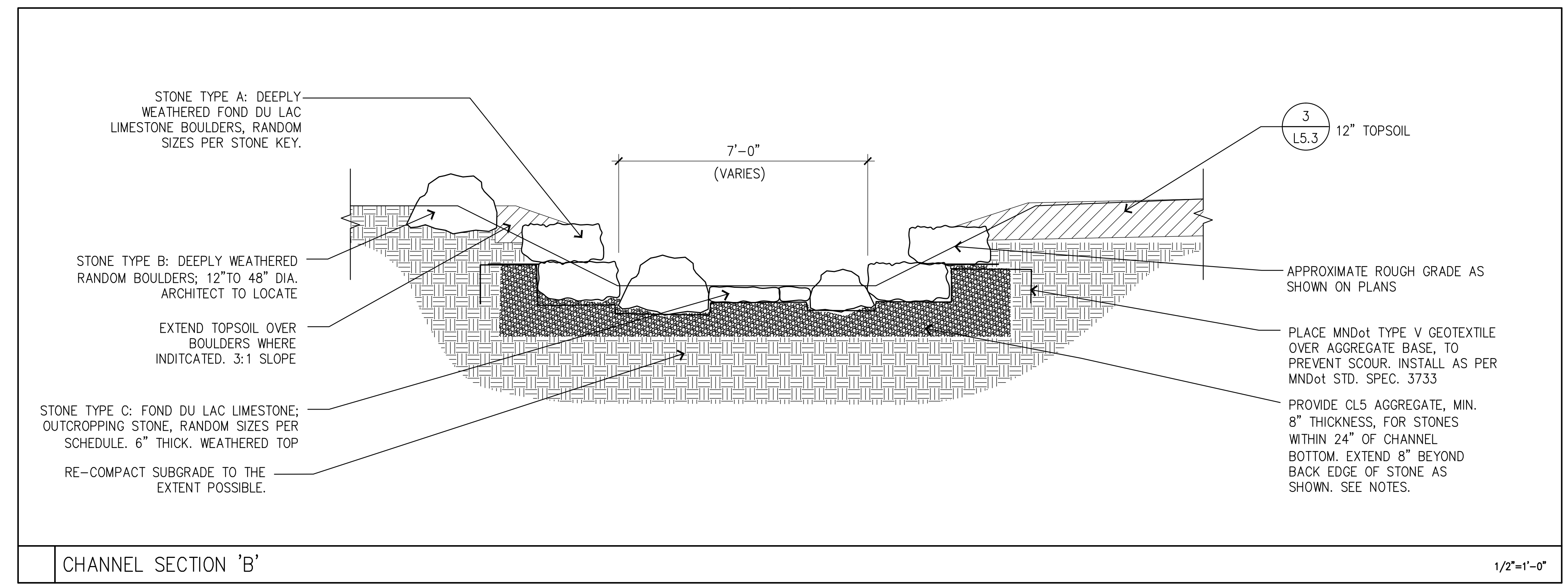
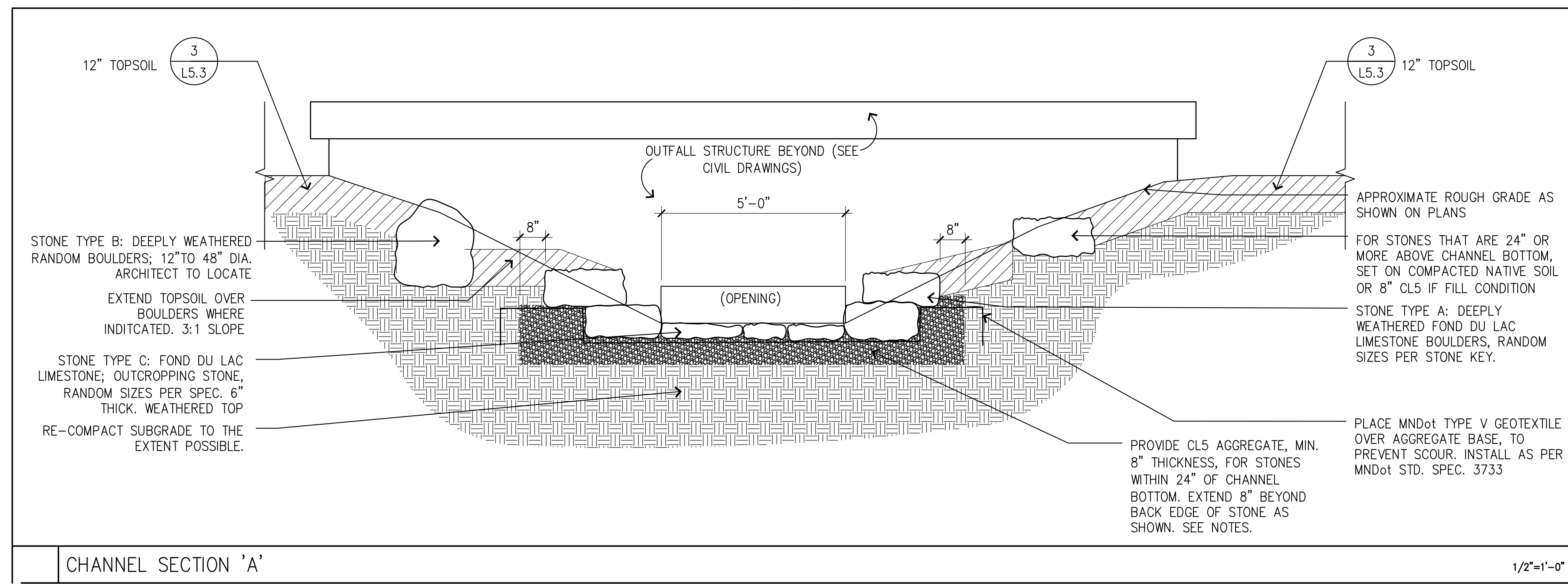
- COMBAT AGGREGATE BASE TO A MINIMUM #5 STANDARD ROTOR DR DENSITY AND 1% 3% OPTIMUM MOISTURE CONTENT.
- PROVIDE ALL SIZE SAMPLES SHOWING THE RANGE OF COLOR AND TEXTURE OF EACH SPECIFIED STONE TYPE FOR APPROVAL BEFORE SET. MAINTAIN SAMPLES ON SITE FOR REFERENCE THROUGHOUT CONSTRUCTION AND REMOVE FROM SITE AS INSTRUCTED BEFORE SET.
- STONE LAYOUT DRAWINGS ARE DIAGRAMMATIC. FINAL STONE LAYOUT TO BE DIRECTED BEFORE SET IN THE FIELD.
- GROUND ELEVATIONS SHOWN ARE APPROXIMATE ROUGH GRADES PRIOR TO STONE LAYOUT.
- NOTE INDICATES NORMAL WATER LINE FOR MINNEAPOLIS AREA. DEWATERING OF SITE DURING CONSTRUCTION MAY BE REQUIRED.
- BRUSH ALL STONES A MINIMUM 6" INTO NATIVE SOIL UNLESS STONE IS STAKED OR UNLESS DIRECTED OTHERWISE BEFORE SET.
- SEE SPECIFICATIONS AND SHEET L5.1 FOR ADDITIONAL INFORMATION.

STONE TYPE	DESCRIPTION	NOMINAL SIZE	QUANTITY
TYPE A	DEEPLY WEATHERED FOND DU LAC LIMESTONE BOULDERS	12" x 24" x 24" (MAX)	1 TON
TYPE B	1/2 DEEPLY WEATHERED FOND DU LAC LIMESTONE BOULDERS 1/2 TYPE C 4" x 4" WEATHERED SANDSTONE BOULDERS	12" DIA. TO 42" DIA. 12" DIA. TO 42" DIA.	3 TON 3 TON
TYPE C	FOND DU LAC OBTUSANGULAR WEATHERED TOSSED SANDSTONE	12" DIA. TO 42" DIA. (MAX)	1 TON



**OUTLINE PLAN  
STONE LAYOUT  
ELEVATION**



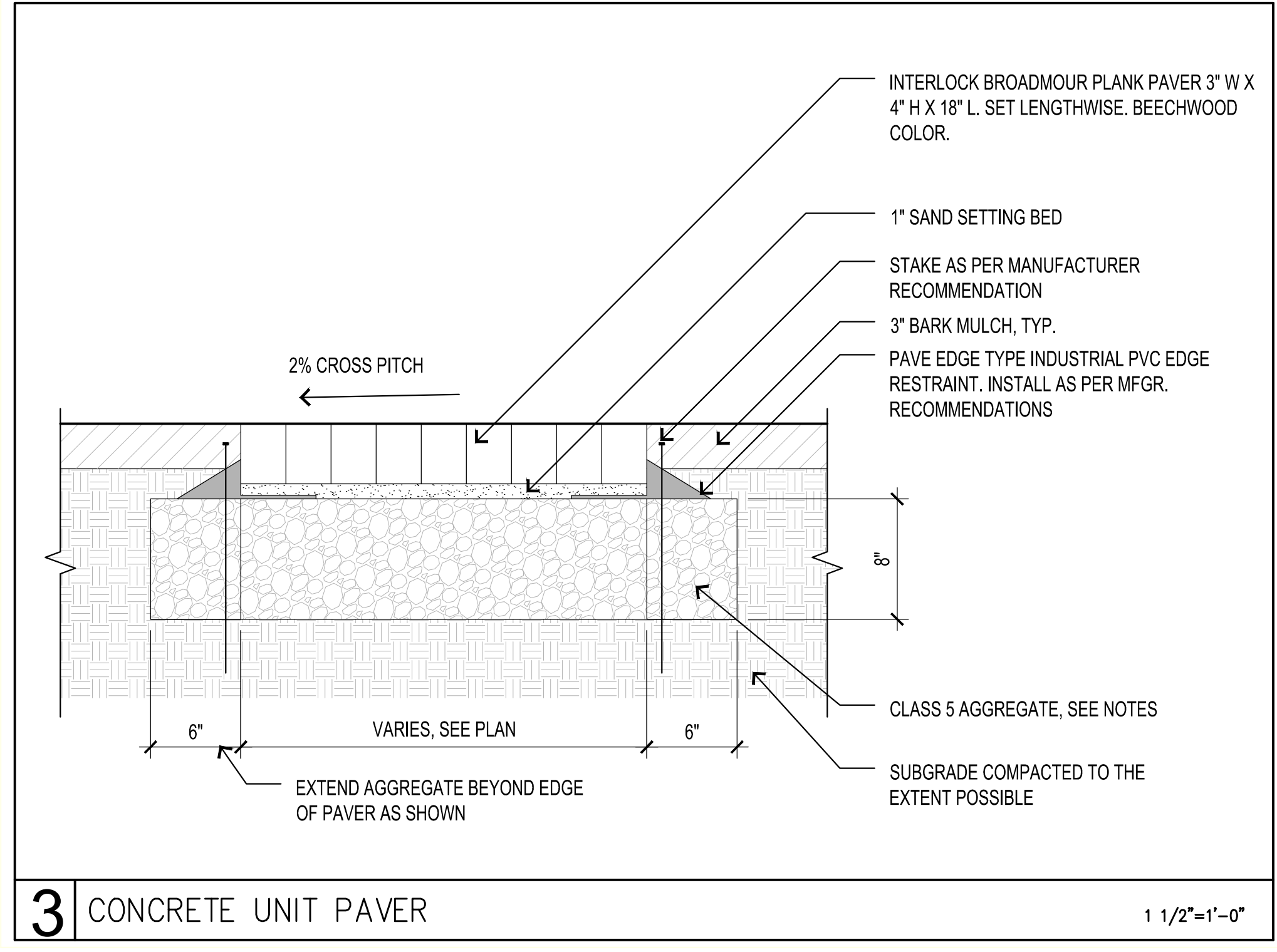
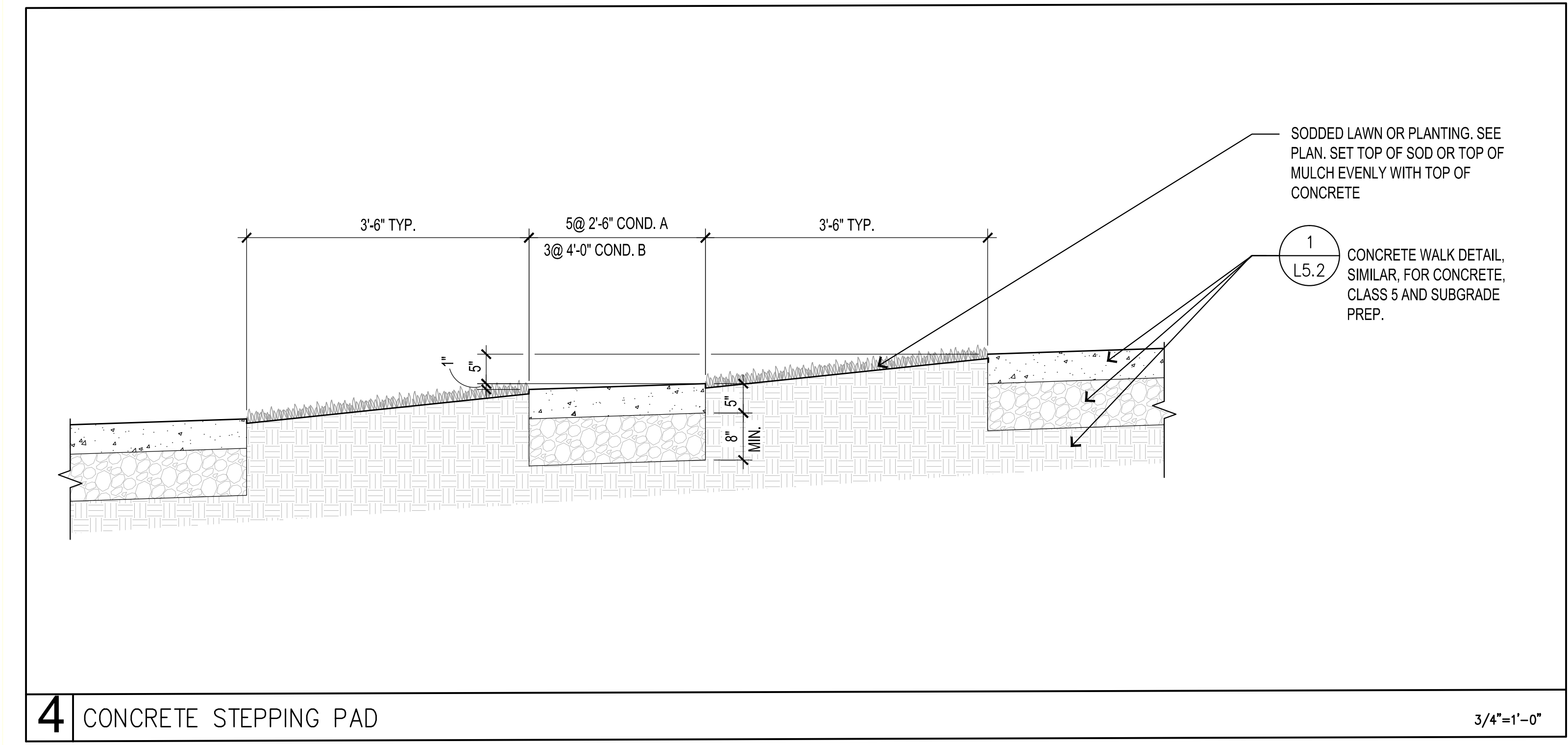
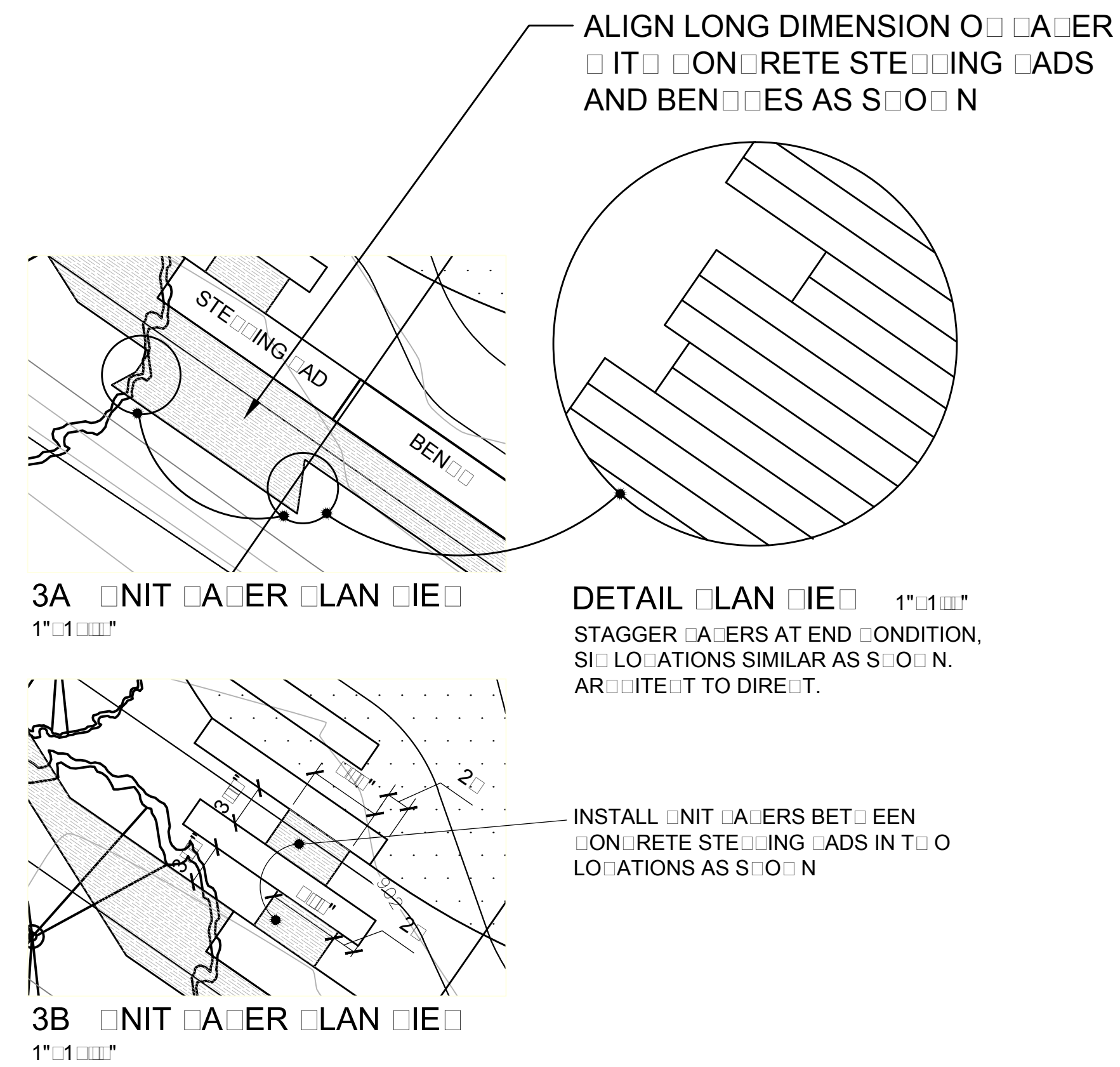
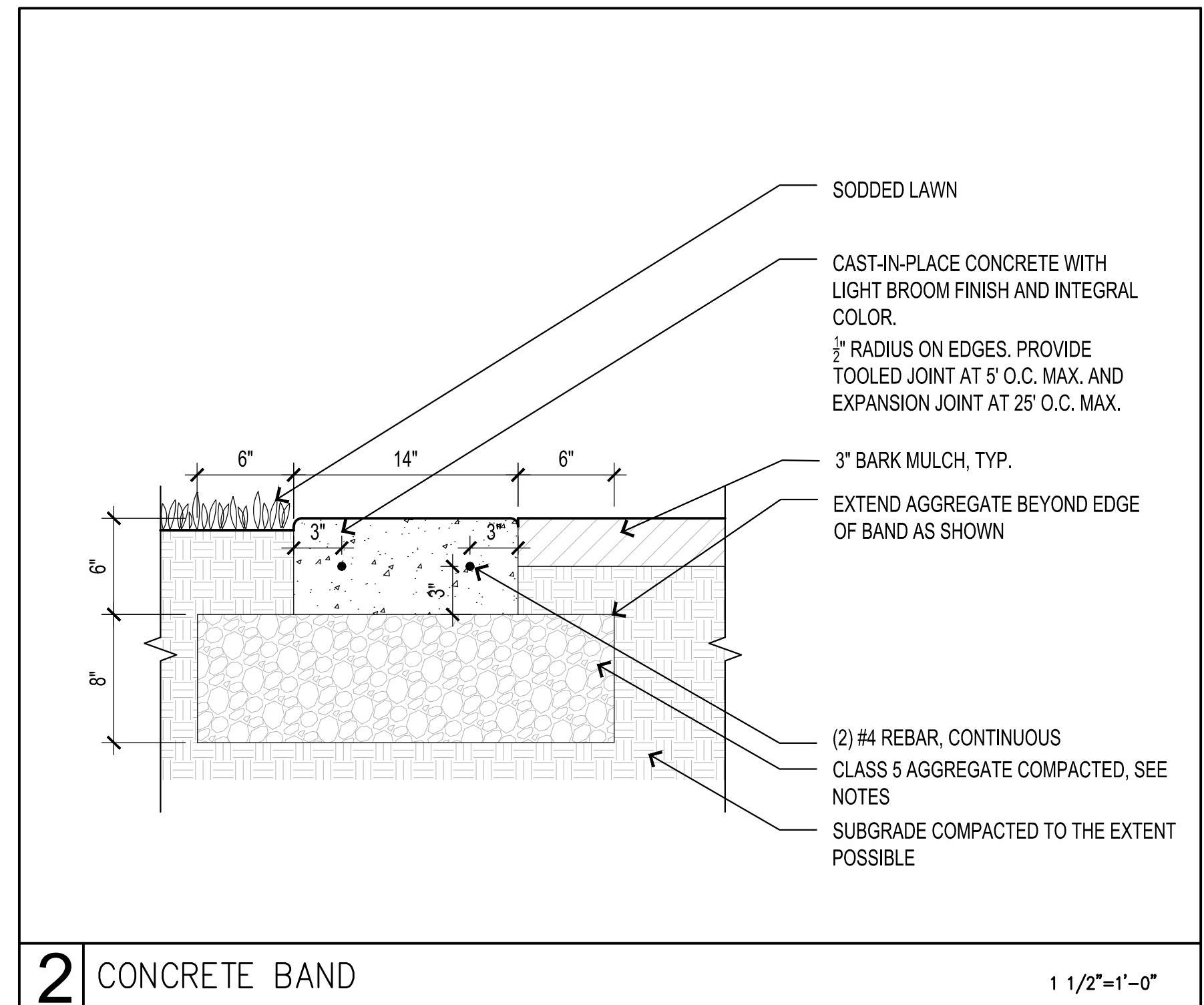
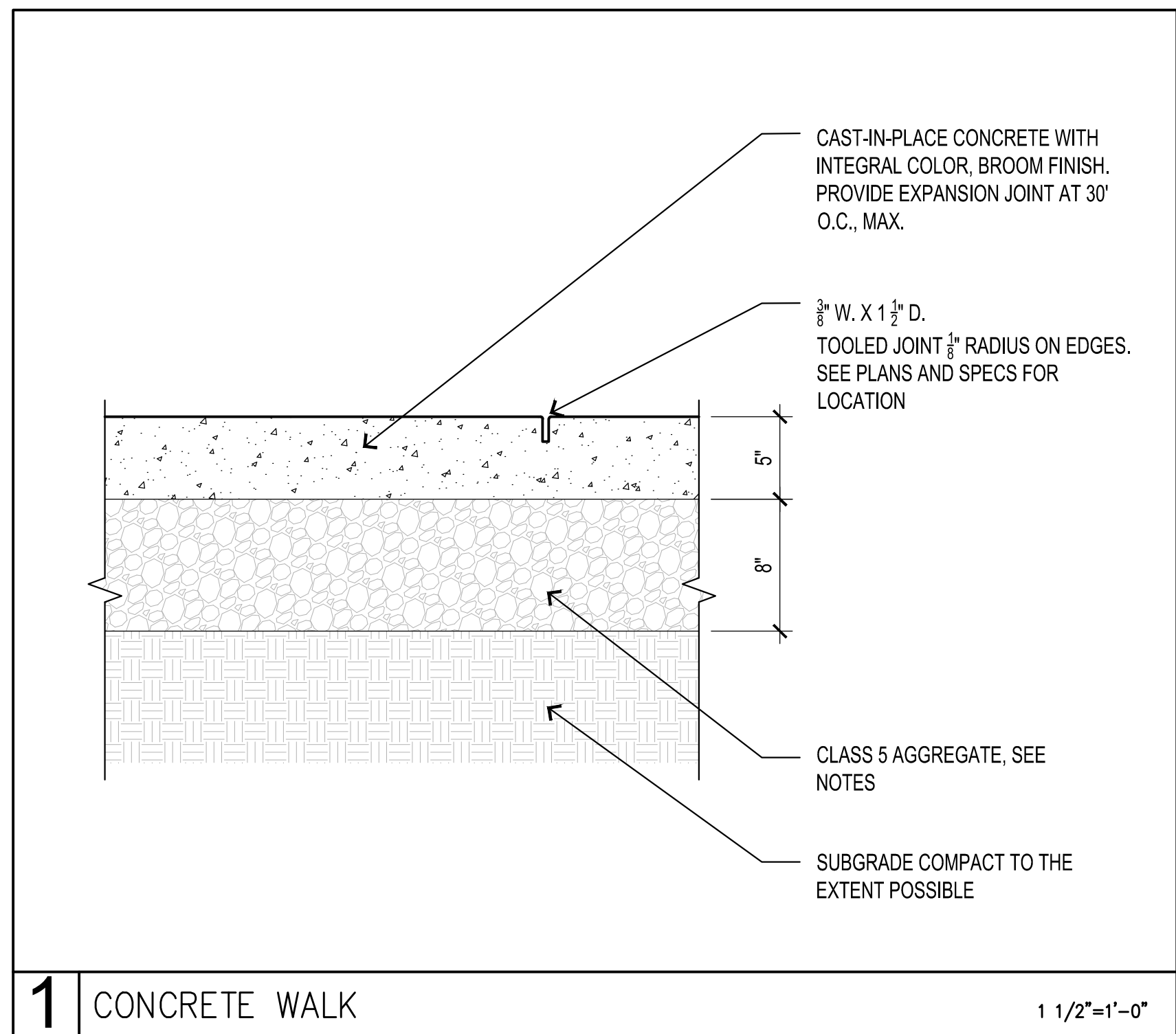


0 1' 2' 4'

OUTFALL CHANNEL  
STONE LAYOUT SECTIONS

NOTES

1. DRAWINGS ARE DIAGRAMMATIC. FINAL STONE PLACEMENT TO BE DIRECTED BY ARCHITECT IN THE FIELD
2. SEE SHEET L5.0 FOR PLAN, NOTES AND STONE SCHEDULE.



## NOTES

1. COMPACT AGGREGATE BASE TO A MINIMUM 95% STANDARD PROCTOR DRY DENSITY AND -1%/+3% OPTIMUM MOISTURE CONTENT.
2. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION

I hereby certify that this plan, specification, or supervision and I am a duly licensed Landscape Architect under the laws of the State of Minnesota.  
ROLAND S. ABERG  
License No.: 47454  
Date: 6/30/14

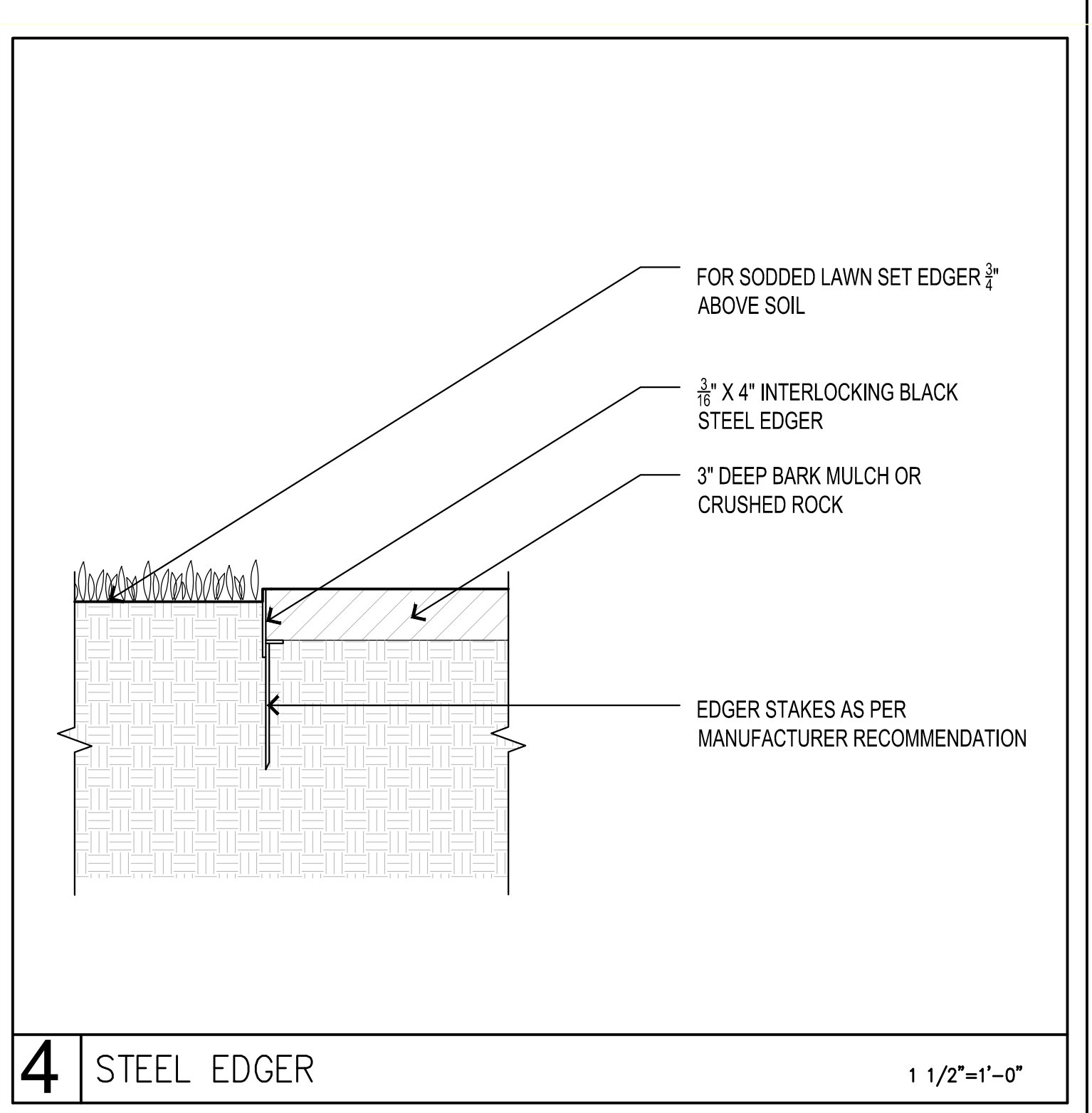
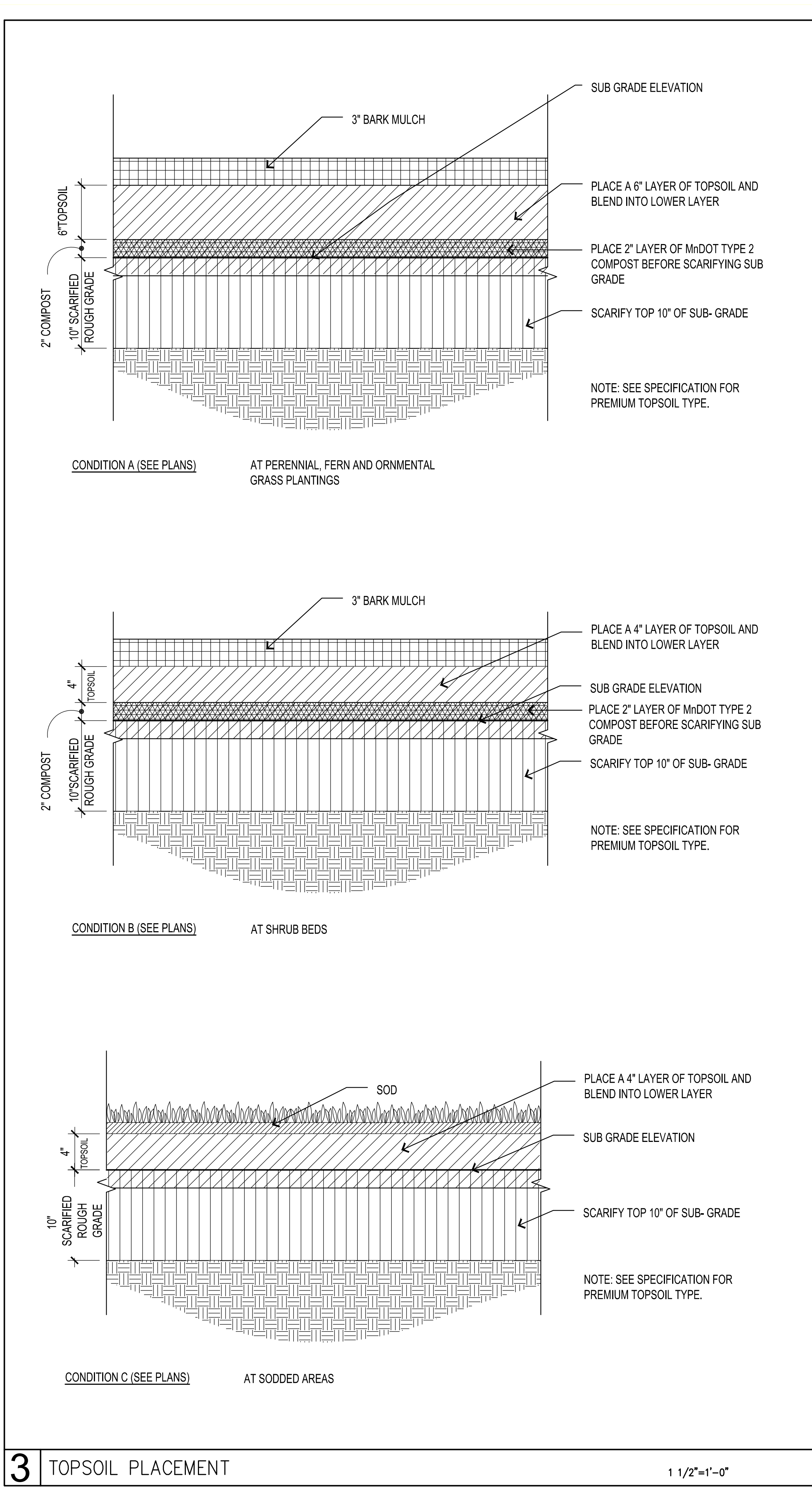
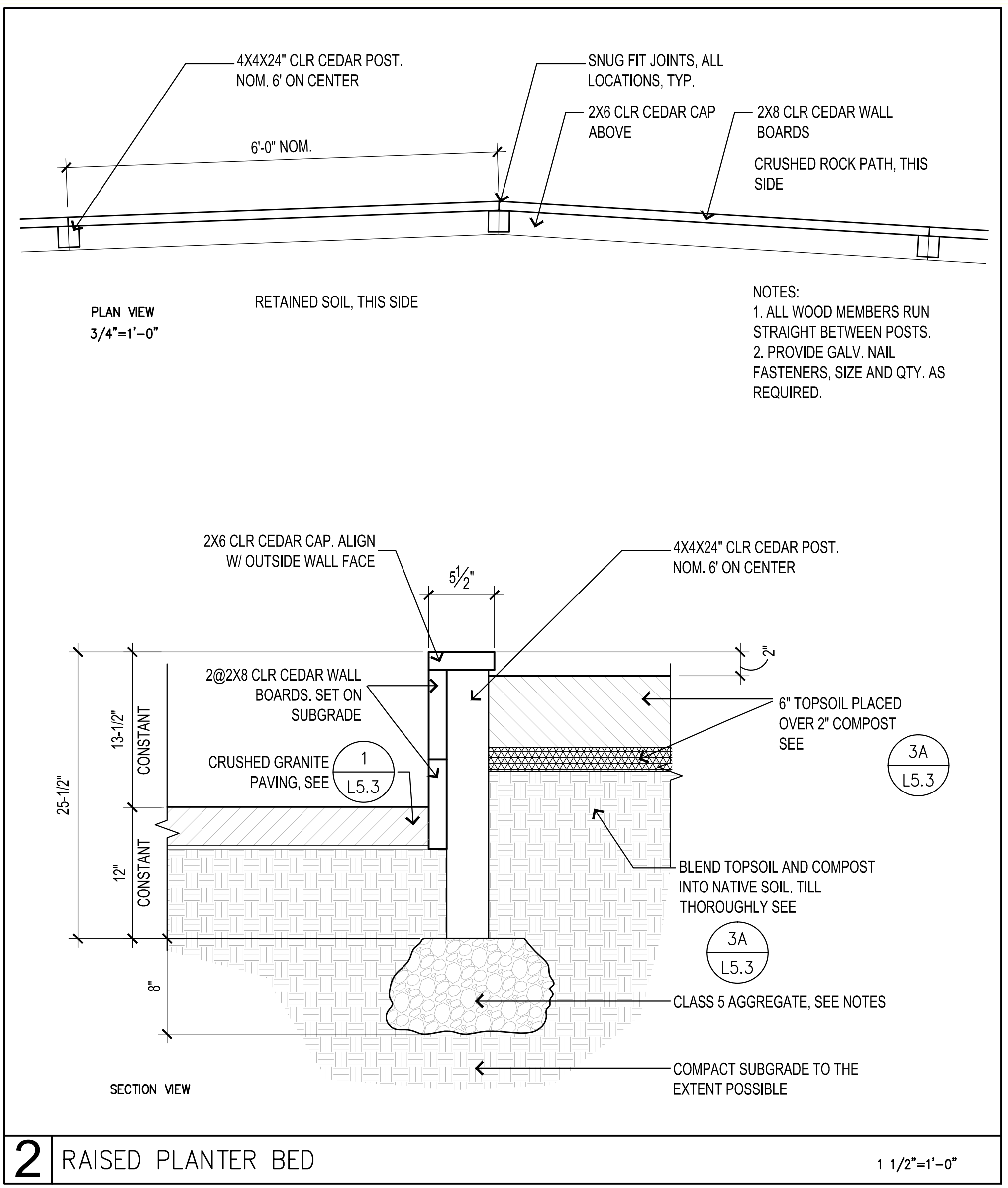
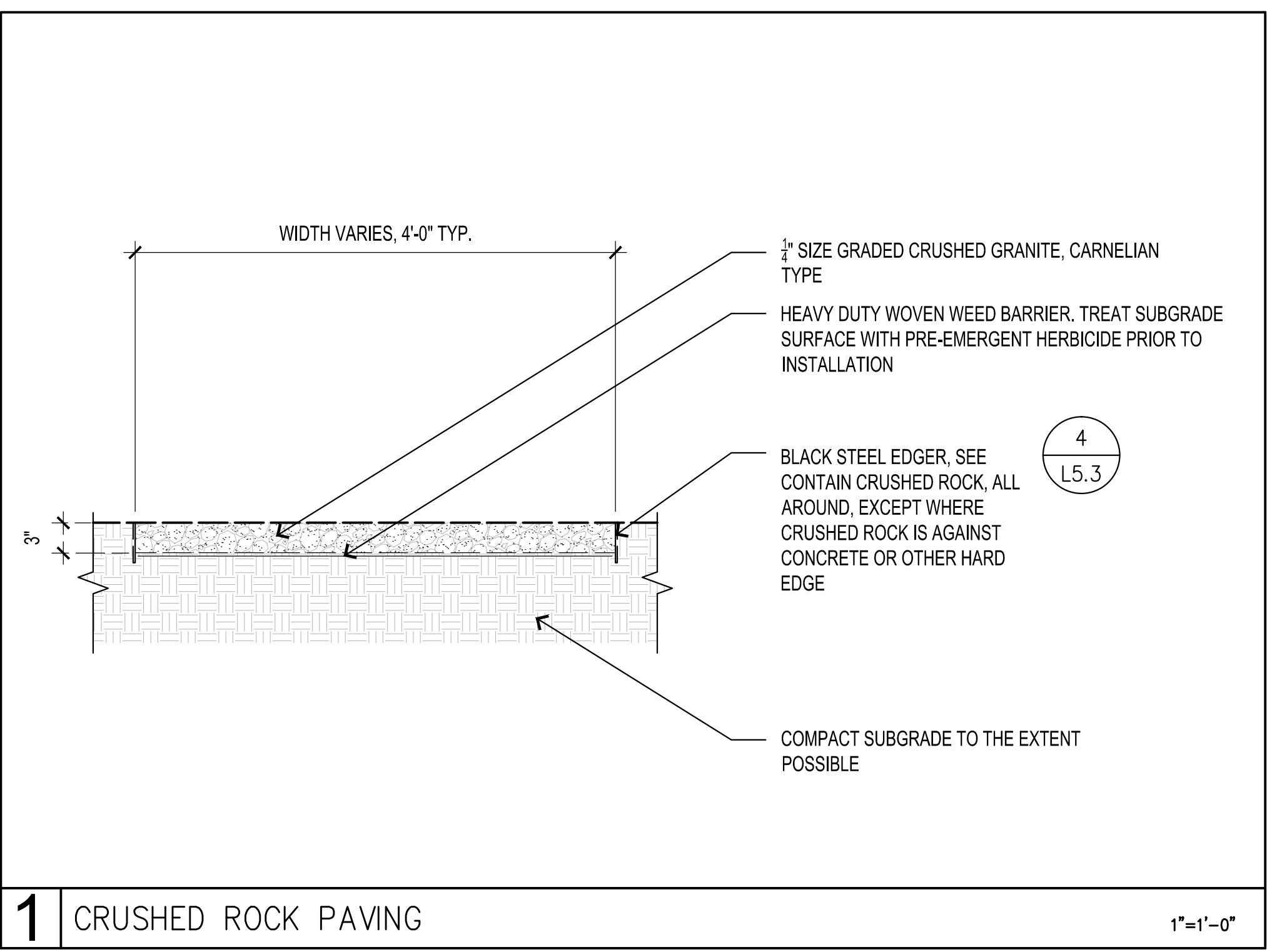
COTTAGEVILLE PARK  
PHASE 1  
Hopkins, Minnesota  
Minnehaha Creek Watershed District

SCALE: #####

NOTE: THIS DRAWING IS 25% OF THE TOTAL DRAWING. SCALE DIMENSIONS, USE FIGURED DIMENSIONS ONLY. FOR BEST RESULTS, REFER TO THE ORIGINAL FOR MEASUREMENTS THAT ARE NOT INDICATED.

DATE	ISSUE
6/30/14	BID ISSUE

REVISIONS		
NO.	DATE	ISSUE



**NOTES**

1. COMPACT AGGREGATE BASE TO A MINIMUM 95% STANDARD PROCTOR DRY DENSITY AND -1%/+3% OPTIMUM MOISTURE CONTENT.

2. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION

MINNEHAHA CREEK WATERSHED DISTRICT  
City of Hopkins  
Wenck Engineers • Scientists Business Professionals  
HART HOWERTON

I hereby certify that this plan, specification, or supervision and I am a duly licensed Landscape Architect under the laws of the State of Minnesota.  
ROLAND S. ABERG  
Date: 6/30/14  
License No.: 47464

COTTAGEVILLE PARK PHASE 1  
Hopkins, Minnesota  
Minnehaha Creek Watershed District

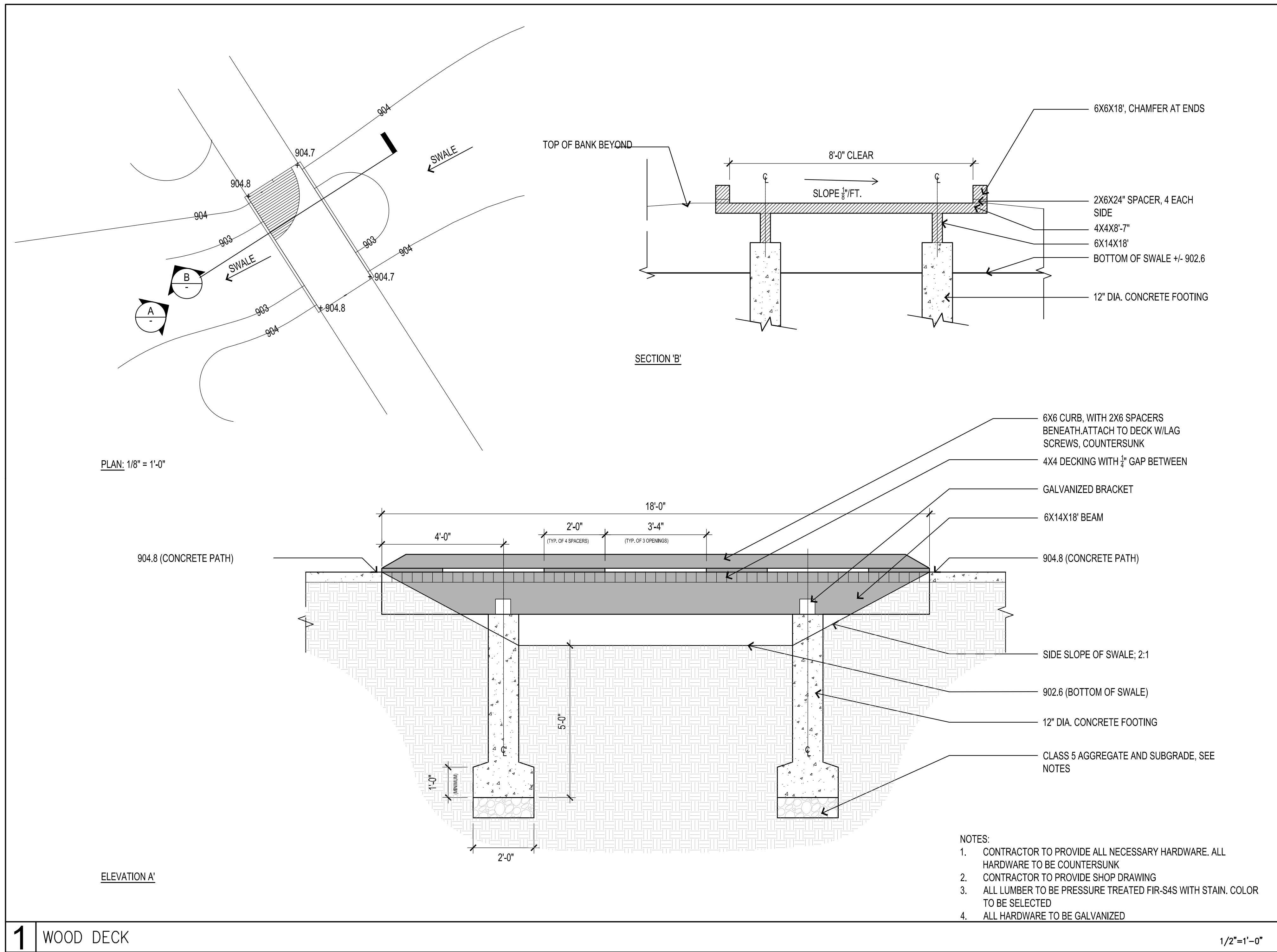
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NOTE: THIS DRAWING IS 2D CAD. DO NOT SCALE DIMENSIONS. USE FIELD DIMENSIONS ONLY. FOR BEST RESULTS, REFER TO THE ARCHITECT'S FOR MEASUREMENTS THAT ARE NOT INDICATED.

DATE	ISSUE
xx/xx/14	BID ISSUE

REVISIONS		
NO.	DATE	ISSUE

DRAWING TITLE:  
LANDSCAPE CONSTRUCTION DETAILS

PROJECT #: 10-032  
DRAWN BY: JAL  
CHECKED BY: RSA  
DRAWING NO.: L5.3



## NOTES

1. COMPACT AGGREGATE BASE TO A MINIMUM 95% STANDARD PROCTOR DRY DENSITY AND -1%/+3% OPTIMUM MOISTURE CONTENT.

2. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION

### COTTAGEVILLE PARK PHASE 1

Hopkins, Minnesota  
Minnehaha Creek Watershed District

SCALE: ###  
NOTE: THIS DRAWING IS 2D. ALL DIMENSIONS ARE IN FEET AND INCHES. UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE TO FACE UNLESS INDICATED OTHERWISE. FOR MEASUREMENTS THAT ARE NOT INDICATED.

DATE	ISSUE
6/30/14	BID ISSUE

#### REVISIONS

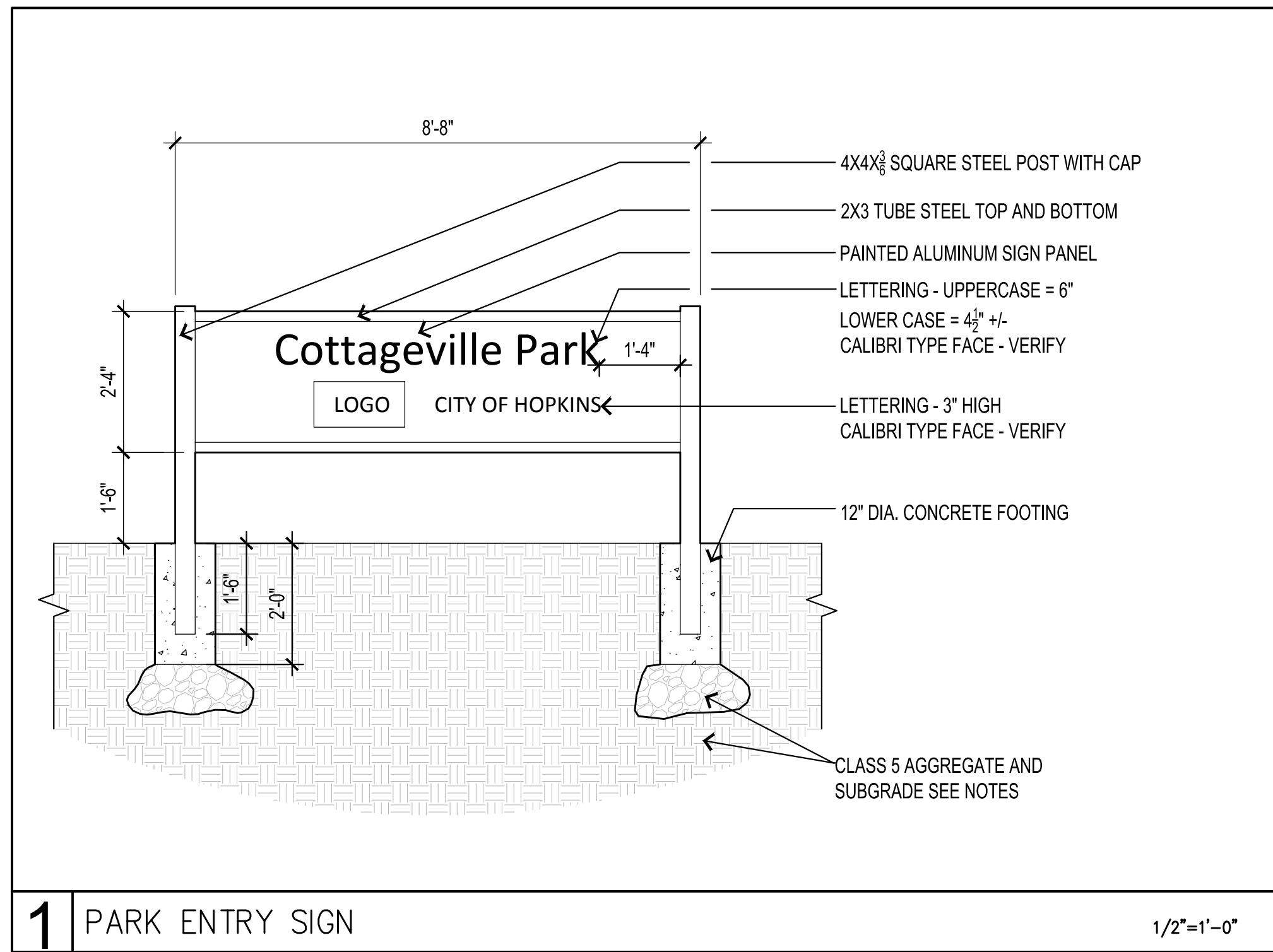
NO.	DATE	ISSUE

DRAWING TITLE:  
LANDSCAPE  
CONSTRUCTION  
DETAILS

PROJECT #: 10-032  
DRAWN BY: JAL  
CHECKED BY: RSA

DRAWING NO:  
**L5.4**

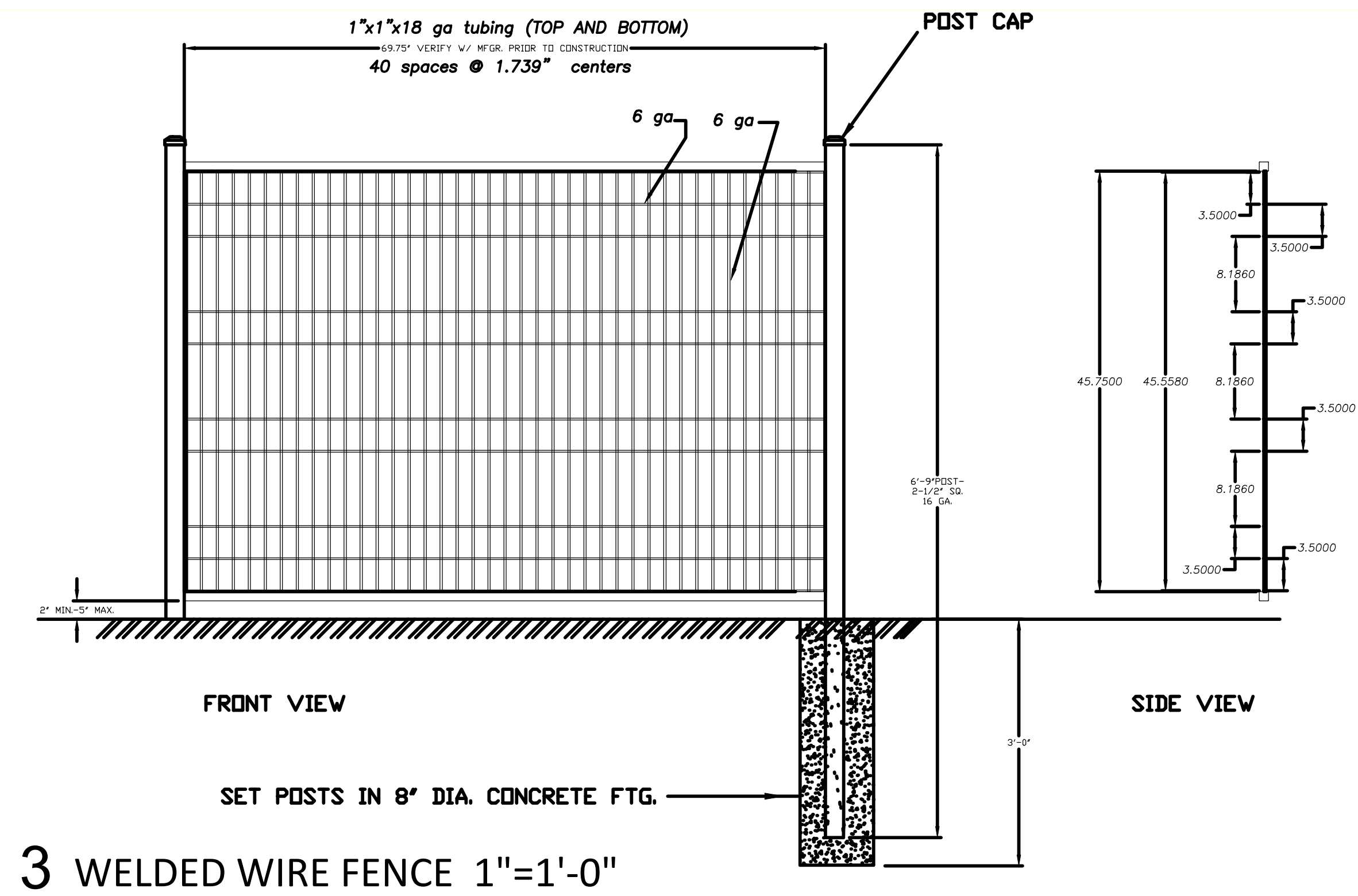
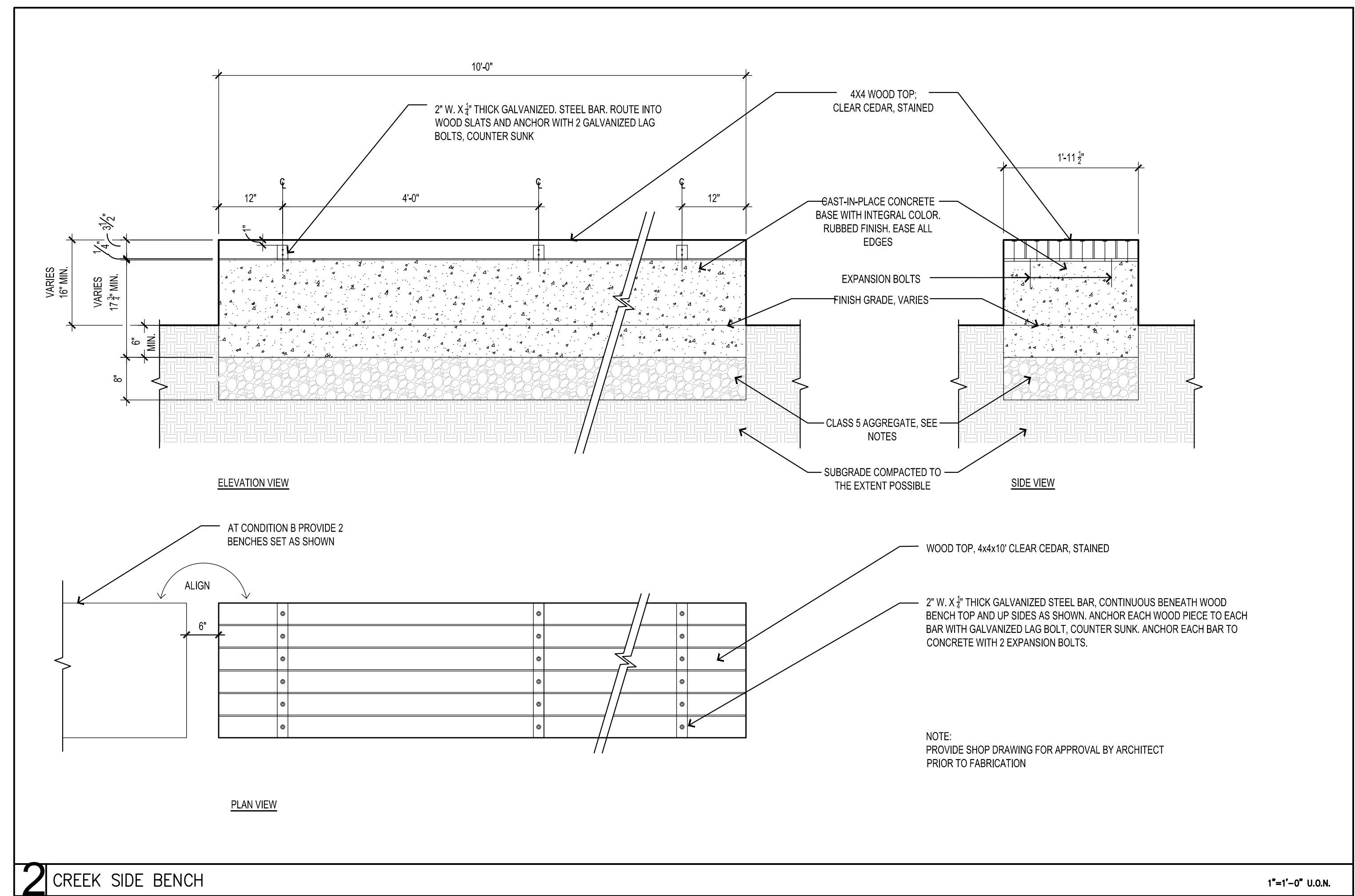




## NOTES

1. COMPACT AGGREGATE BASE TO A MINIMUM 95% STANDARD PROCTOR DRY DENSITY AND -1%/+3% OPTIMUM MOISTURE CONTENT.

2. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION



## COTTAGEVILLE PARK PHASE 1

Hopkins, Minnesota  
Minnehaha Creek Watershed District

SCALE: ###  
NOTE: THIS DRAWING IS 25% OF THE TOTAL DRAWING. DO NOT  
SCALE DIMENSIONS. USE FIELD DIMENSIONS  
UNLESS OTHERWISE SPECIFIED. DIMENSIONS FROM  
ARCHITECT'S FOR MEASUREMENTS THAT ARE  
NOT INDICATED.

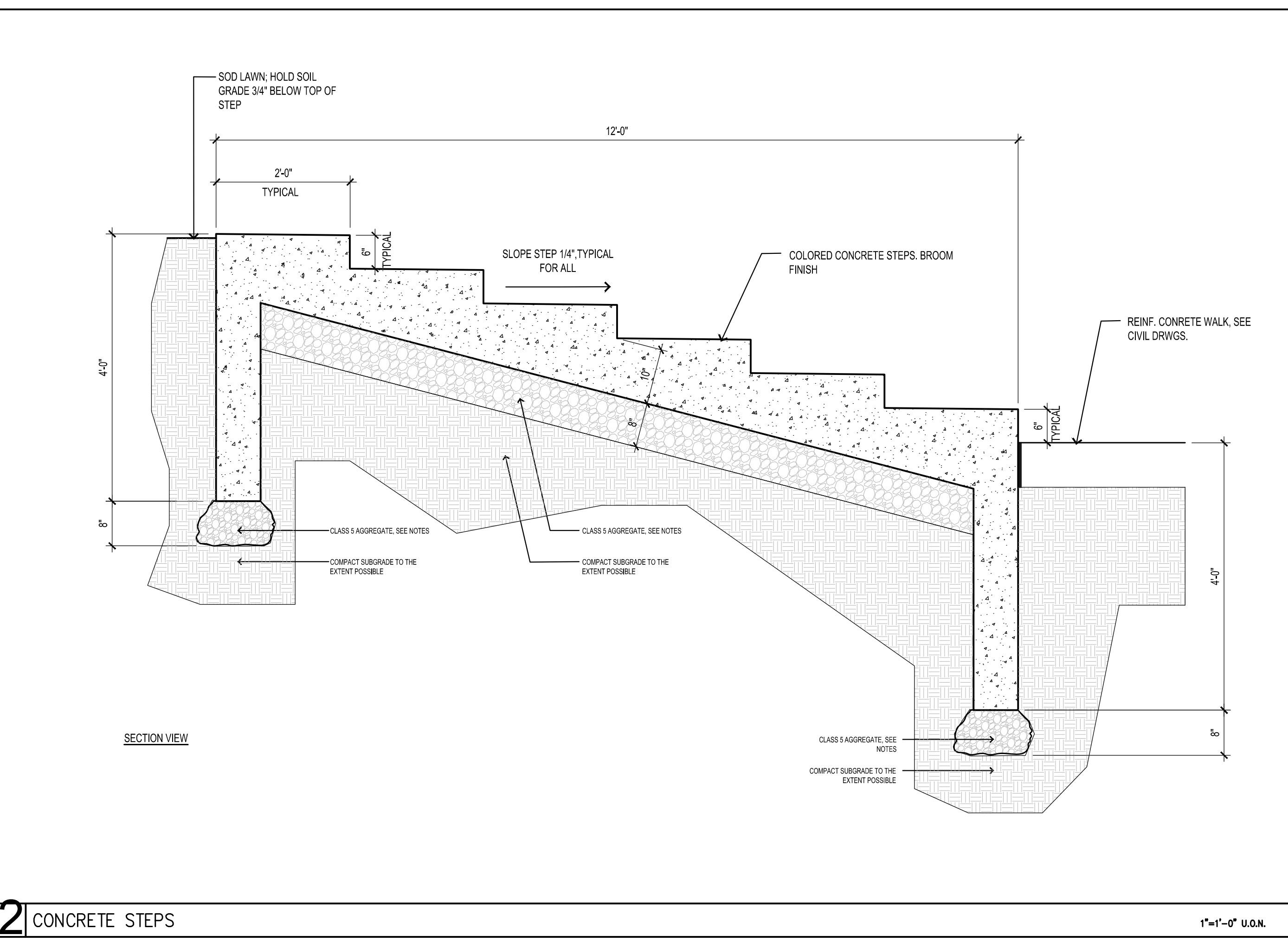
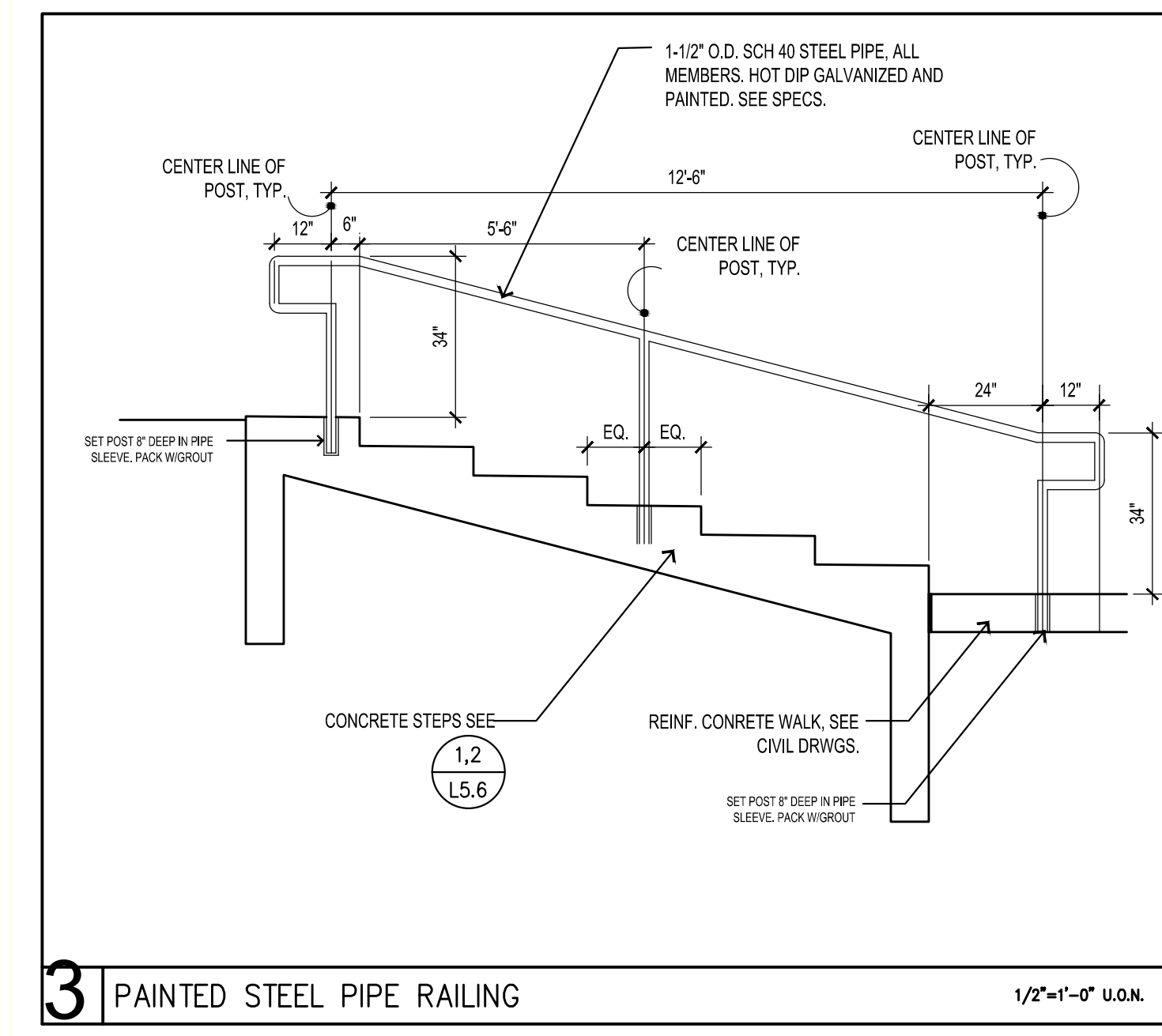
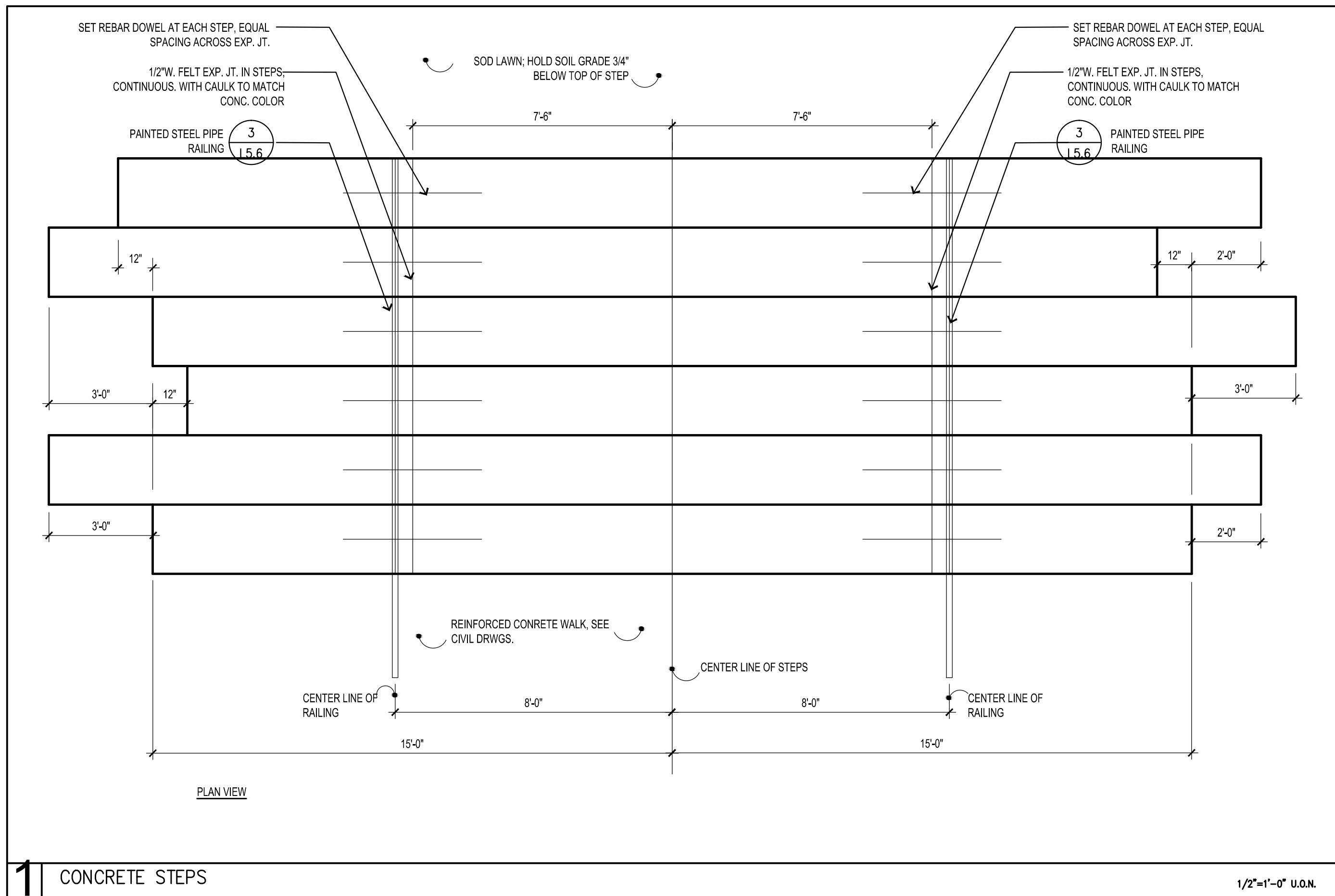
DATE	ISSUE
xx/xx/14	BID ISSUE

REVISIONS		
NO.	DATE	ISSUE

DRAWING TITLE:  
LANDSCAPE  
CONSTRUCTION  
DETAILS

PROJECT #:  
10-032  
DRAWN BY:  
JAL  
CHECKED BY:  
RSA

DRAWING NO:  
L5.5



## NOTES

1. COMPACT AGGREGATE BASE TO A MINIMUM 95% STANDARD PROCTOR DRY DENSITY AND -1%/+3% OPTIMUM MOISTURE CONTENT.
2. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION

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ROLAND S. ABERG  
 License No.: 47464  
 Date: 6/30/14

# COTTAGEVILLE PARK PHASE 1

Hopkins, Minnesota  
 Minnehaha Creek Watershed District

SCALE: ###  
 NOTE: THIS DRAWING IS 2D AND DOES NOT SCALE DRAWINGS. USE FIELD DIMENSIONS ONLY. FOR BEST RESULTS, OBTAIN DIMENSIONS FROM ARCHITECT FOR MEASUREMENTS THAT ARE NOT INDICATED.

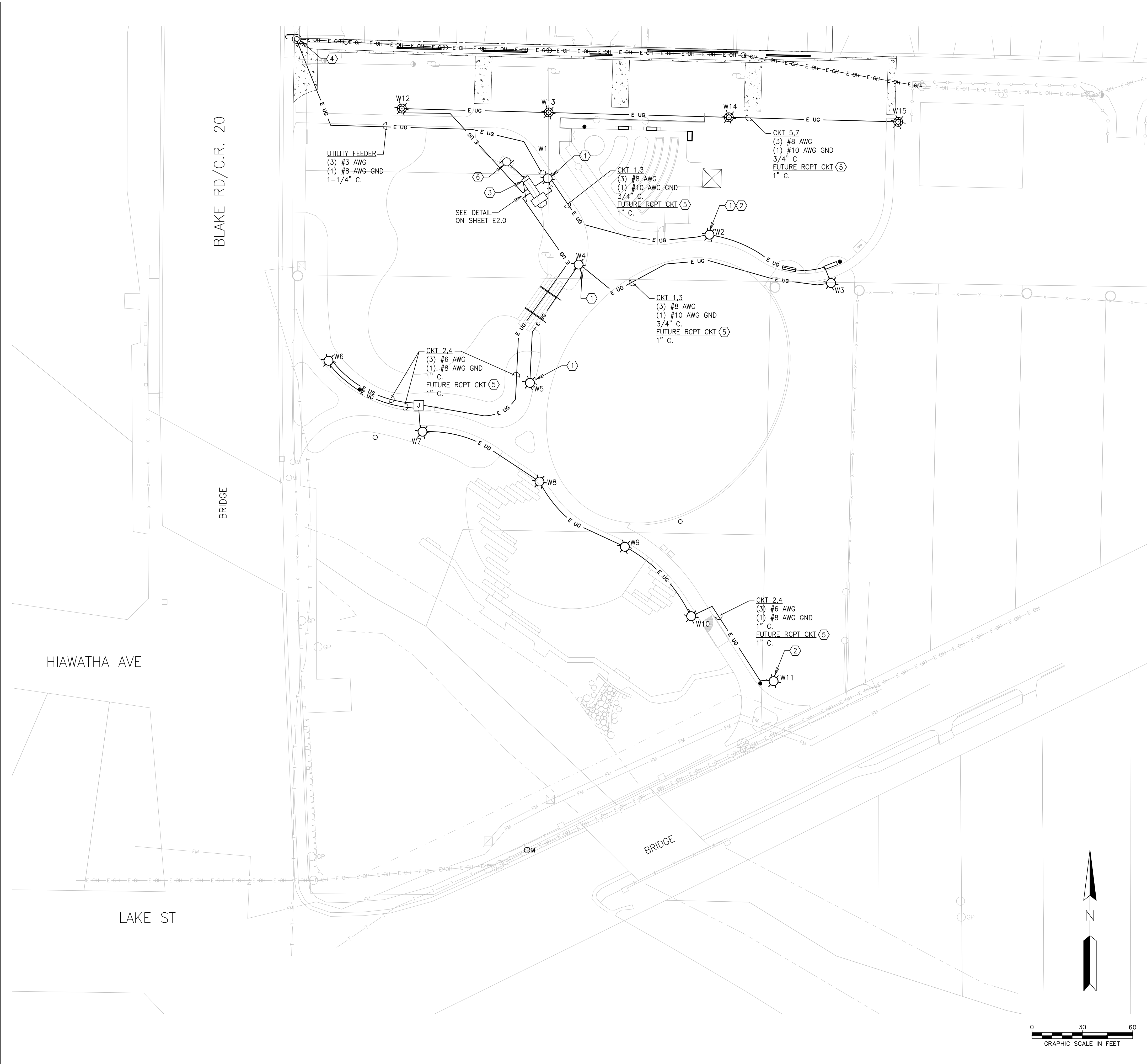
DATE	ISSUE
xx/xx/14	BID ISSUE

REVISIONS		
NO.	DATE	ISSUE

DRAWING TITLE:  
**LANDSCAPE  
 CONSTRUCTION  
 DETAILS**

PROJECT #: 10-032  
 DRAWN BY: JAL  
 CHECKED BY: RSA  
 DRAWING NO:

**L5.6**



**GENERAL NOTES**

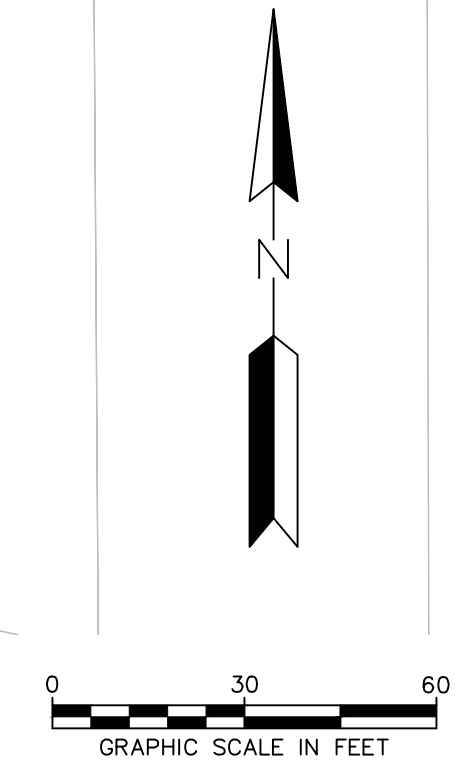
1. ALL LOCATIONS OF EXISTING UTILITIES SHOWN HEREON HAVE BEEN ESTABLISHED BY FIELD SURVEY OR OBTAINED FROM AVAILABLE RECORDS AND SHOULD THEREFORE BE CONSIDERED APPROXIMATE ONLY AND NOT NECESSARILY COMPLETE OR ACCURATE. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO INDEPENDENTLY VERIFY THE ACCURACY OF ALL UTILITY LOCATIONS SHOWN AND TO FURTHER DISCOVER AND AVOID ANY OTHER UTILITIES NOT SHOWN HEREON WHICH MAY BE AFFECTED BY THE IMPLEMENTATION OF THIS PLAN.
2. THE CONTRACTOR SHALL TAKE THE NECESSARY PRECAUTIONS DURING INSTALLATION TO PROTECT EXISTING UTILITIES FROM DAMAGE. NOTE EXISTENCE OF EXTENSIVE BURIED CABLE AND PIPING. ANY DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. CONTRACTOR SHALL COORDINATE ANY TEMPORARY SHUT OFF OF SERVICE WITH AFFECTED OWNERS AND ONLY WITH PERMISSION OF ENGINEER.
3. THE EXACT LOCATIONS OF EQUIPMENT AND THE EXACT ROUTING OF CONDUIT SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR. DRAWINGS INDICATE THE EXTENT AND GENERAL LAYOUT OF THE ELECTRICAL SYSTEMS. DRAWINGS ARE DRAWN TO THE SCALE INDICATED BUT THE DRAWINGS SHALL NOT TAKE PRECEDENCE OVER FIELD MEASUREMENTS. CONTRACTOR SHALL COORDINATE WITH OTHER TRADES REGARDING LOCATIONS OF EQUIPMENT.
4. OUTDOOR ELECTRICAL EQUIPMENT AND INSTALLATION SHALL BE SUITABLE FOR OUTDOOR LOCATIONS. NEMA 3R ENCLOSURES FOR ELECTRICAL EQUIPMENT AND NEMA 4X ENCLOSURES FOR INSTRUMENTS AND CONTROL DEVICES SHALL BE REQUIRED.
5. SCHEDULE 40 PVC SHALL BE USED FOR ALL UNDERGROUND FEEDER AND BRANCH POWER AND CONTROL CIRCUITS. ALL CONDUITS SHALL LONG SWEEP UP (NO 90DEG LB ELBOWS) INTO PVC FOR OUTDOOR EQUIPMENT. ALL CONDUCTORS SHALL BE COPPER. UNDERGROUND FEEDERS SHALL BE INSTALLED WITH 24 INCHES CLEAR BELOW GRADE AND 36 INCHES BELOW TOP OF ANY ROADWAY.
6. ALL WORK SHALL BE UNDER THE DIRECT SUPERVISION OF A MASTER ELECTRICIAN AND LICENSED CONTRACTOR.
7. FURNISH PERMITS AS REQUIRED FOR ELECTRICAL CONSTRUCTION AND PAY ALL ELECTRICAL INSPECTION CHARGES FOR THE CONSTRUCTION.
8. CONTRACTOR SHALL PERFORM WORK PER LATEST ISSUE OF NEC AND ALL LOCAL CODES AND REQUIREMENTS.

**KEYED NOTES**

- ① LIGHT POLE AND FIXTURE SHALL BE SET 4 FEET OFF PAVED WALKING PATH.
- ② COORDINATE WITH CIVIL DRAWINGS TO AVOID UNDERGROUND PIPING WHEN INSTALLING LIGHT POLE.
- ③ IRRIGATION CONTROL PANEL MOUNTED TO SIDE OF LIGHTING SERVICE PANEL.
- ④ CONTRACTOR SHALL FURNISH AND INSTALL ONE (1) COPPERCLAD, STEEL, 5/8" X 8" GROUND ROD FOR NEW SERVICE DISCONNECT AT LIGHTING SERVICE PANEL OR AT LOCATION OF EXISTING SERVICE DISCONNECT. IT IS INTENDED THAT THE LIGHTING SERVICE DISCONNECTING MEANS BE INSTALLED PER NEC ARTICLE 230 PART VI. IT IS UNDERSTOOD THAT AT LEAST ONE MAIN DISCONNECT IS EXISTING. THE PROPOSED NEW LIGHTING SERVICE DISCONNECT SHOULD BE ADJACENT TO ANY EXISTING DISCONNECTS, THAT DISCONNECTS SHOULD BE READILY ACCESSIBLE AND THAT THE TOTAL NUMBER OF DISCONNECTS INCLUDING THE PROPOSED NEW LIGHTING SERVICE DISCONNECT SHALL NOT EXCEED SIX. CONTRACTOR SHALL FURNISH AND INSTALL A "GROUNDING ELECTRODE CONDUCTOR" FROM LIGHTING SERVICE PANEL NEUTRAL BUS TO GROUND ROD. CONTRACTOR SHALL TERMINATE NEUTRAL CONDUCTOR FROM SERVICE TRANSFORMER ON SERVICE PANELBOARD NEUTRAL BUS. SERVICE PANELBOARD SHALL BE PROVIDED WITH A NEUTRAL TO GROUND BUS BONDING CONDUCTOR (MAIN BONDING JUMPER). REFER TO NEC 250.24 AND 250.102.
- ⑤ THERE SHALL BE A FUTURE RECEPTACLES CIRCUIT FOR EACH WALKWAY LIGHTING CIRCUIT. RUN THE EMPTY CONDUIT IN THE SAME TRENCH AS THE LIGHTING CIRCUIT TO THE LIGHT POLES. THIS DOES NOT INCLUDE THE ACCENT LIGHTING CIRCUITS.
- ⑥ IRRIGATION BOOSTER PUMP, CONTROLLED BY IRRIGATION CONTROL PANEL. PUMP CIRCUIT SHALL BE (2) #12 AWG, (1) #12 AWG GND, 3/4" C.

**LEGEND**

- W# NEW WALKWAY LED LIGHT FIXTURE AND POLE, 115W, 120V LANDSCAPEFORMS ALCOTT TYPE 5 DISTRIBUTION OR EQUAL. LIGHT POLES SHALL BE ORDERED WITH CUTOUT FOR RECEPTACLE AND COVER. COORDINATE WITH MANUFACTURER.
- E UG NEW ELECTRICAL FEEDER SCHEDULE 40 PVC CONDUIT AND XHHW WIRE UNLESS OTHERWISE NOTED
- J NEW HANDHOLE/JUNCTION BOX QUAZITE #PG1324BA18 & #PG1324HG00 (COVER) OR EQUAL COVER SHALL BE MARKED "ELECTRICAL"



I hereby certify that this plan, specification, or schedule of values was prepared by me or under my direct supervision and I am a duly licensed Engineer under the laws of the State of Minnesota.  
 STEVEN L. ELLETIER Date: 6/30/2014 License No: 45-43

**COTTAGEVILLE PARK  
 PHASE 1**  
 Hopkins, Minnesota  
 Minnehaha Creek Watershed District

SCALE: AS SHOWN  
 NOTE: THIS DRAWING IS 24" X 36" IN SIZE. ALL DIMENSIONS SHALL BE TO FACE UNLESS OTHERWISE NOTED. FOR MEASUREMENTS THAT ARE NOT INDICATED.

DATE	ISSUE
6/30/2014	BID ISSUE

REVISIONS		
NO.	DATE	ISSUE

**ELECTRICAL  
 SITE PLAN**

PROJECT #: 0185-5097  
 DRAWN BY: PC  
 CHECKED BY: SLP

DRAWING NO:  
**E1.0**

I hereby certify that this plan, specification, or schedule of values was prepared, checked, and supervised and I am a duly licensed Engineer under the laws of the State of Minnesota.

STE: EN. L. ELLETIER  
Date: 05/14/14  
License No: 45-43

COTTAGEVILLE PARK  
PHASE 1  
Hopkins, Minnesota  
Minnehaha Creek Watershed District

SCALE: AS SHOWN  
NOTE: THIS DRAWING IS 24" x 36" IN SIZE. FOR ALL OTHER SCALES DRAWINGS USE FIGURED DIMENSIONS UNLESS OTHERWISE SPECIFIED OR INDICATED BY ARCHITECT FOR MEASUREMENTS THAT ARE NOT INDICATED.

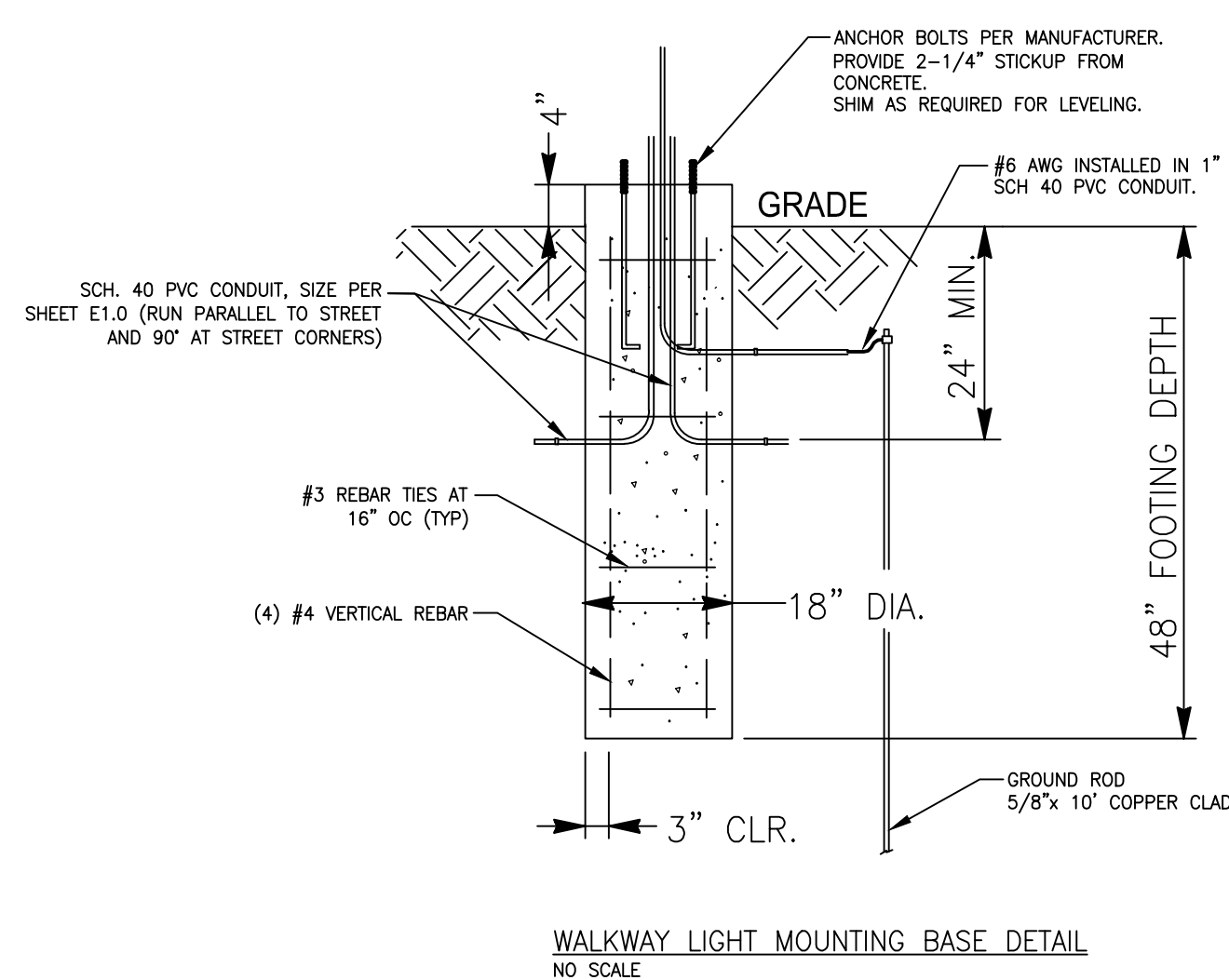
DATE	ISSUE
6/30/2014	BID ISSUE

REVISIONS		
NO.	DATE	ISSUE

DRAWING TITLE:  
**ELECTRICAL  
DETAILS**

PROJECT #: 0185-5097  
DRAWN BY: PC  
CHECKED BY: SLP

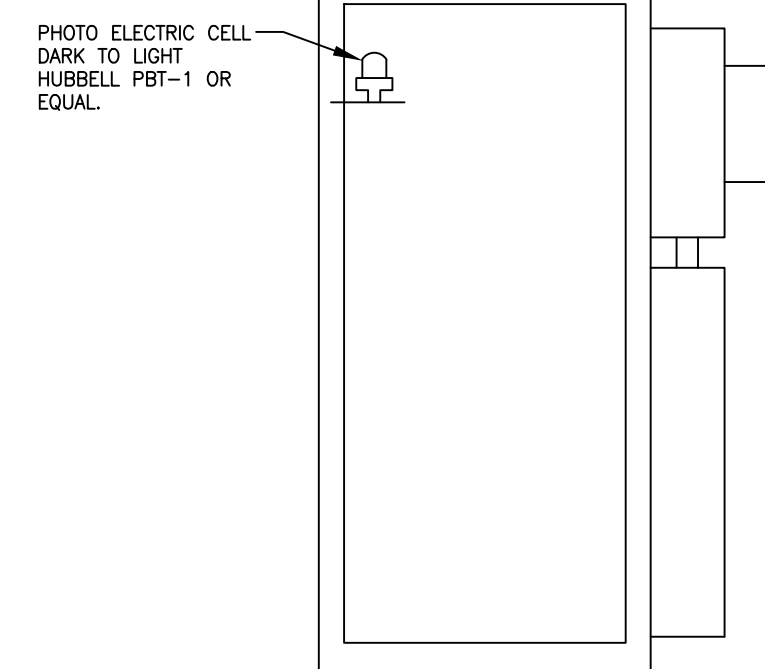
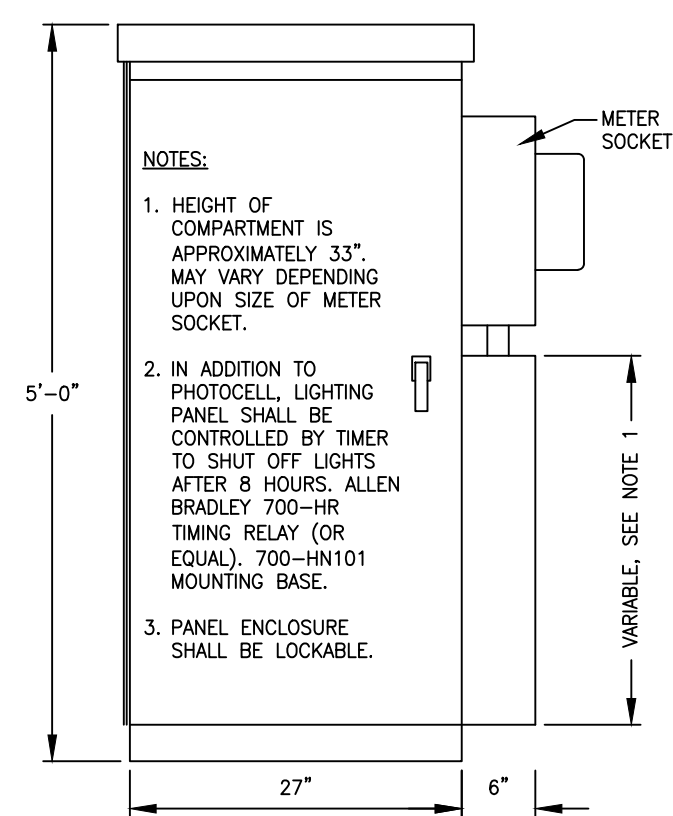
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**E2.0**



NOTES:

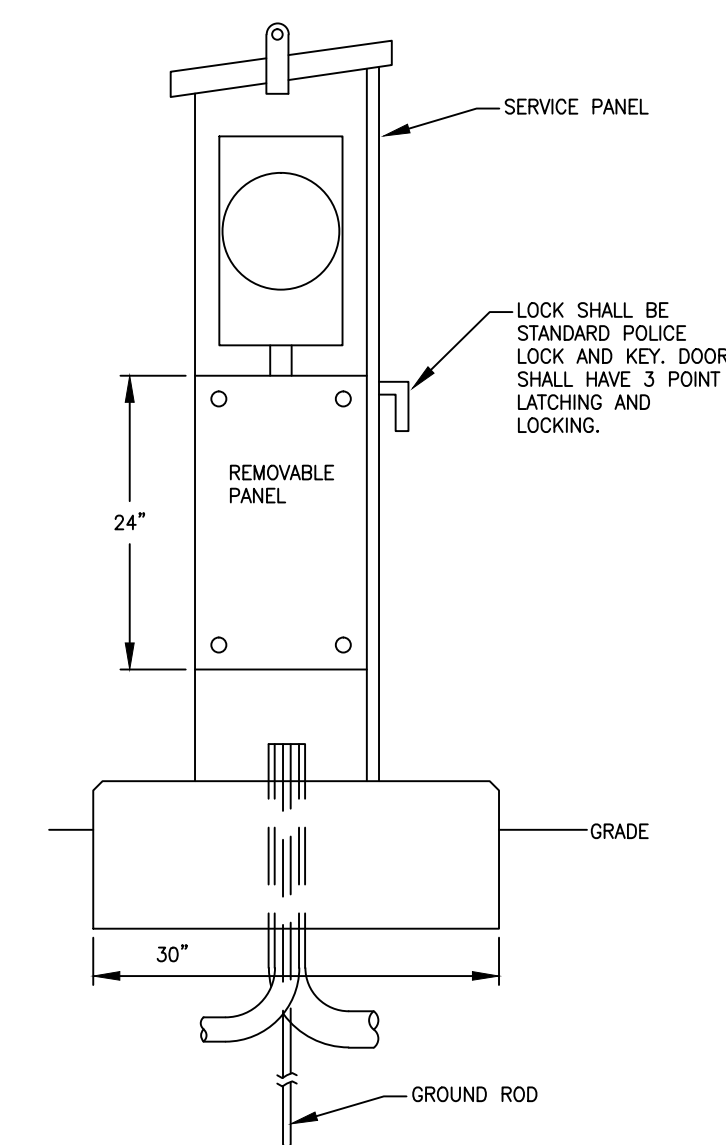
- LAMP HEIGHT SHALL BE 12 FEET.
- FORMING MATERIAL (SONOTUBE) SHALL BE REMOVED FROM THE TOP OF THE FOUNDATION TO SIX INCHES BELOW FINISHED GRADE AFTER CONCRETE HAS SET.
- CONCRETE SHALL BE 4000 PSI (28 DAY) AND SHALL HAVE 6% AIR ENTRAINMENT.
- VERIFY BOLT PATTERN WITH LIGHT MANUFACTURER.
- CONTRACTOR SHALL TERMINATE CONDUCTORS IN THE BASE OF EACH POLE. TERMINATIONS AND GROUNDING SHALL BE INSTALLED PER NEC. ALL CONDUITS SHALL BE CAPPED (BOTH ENDS) UNTIL CONDUCTORS, BASES, AND POLES ARE INSTALLED.

WALKWAY LIGHT MOUNTING BASE DETAIL  
NO SCALE

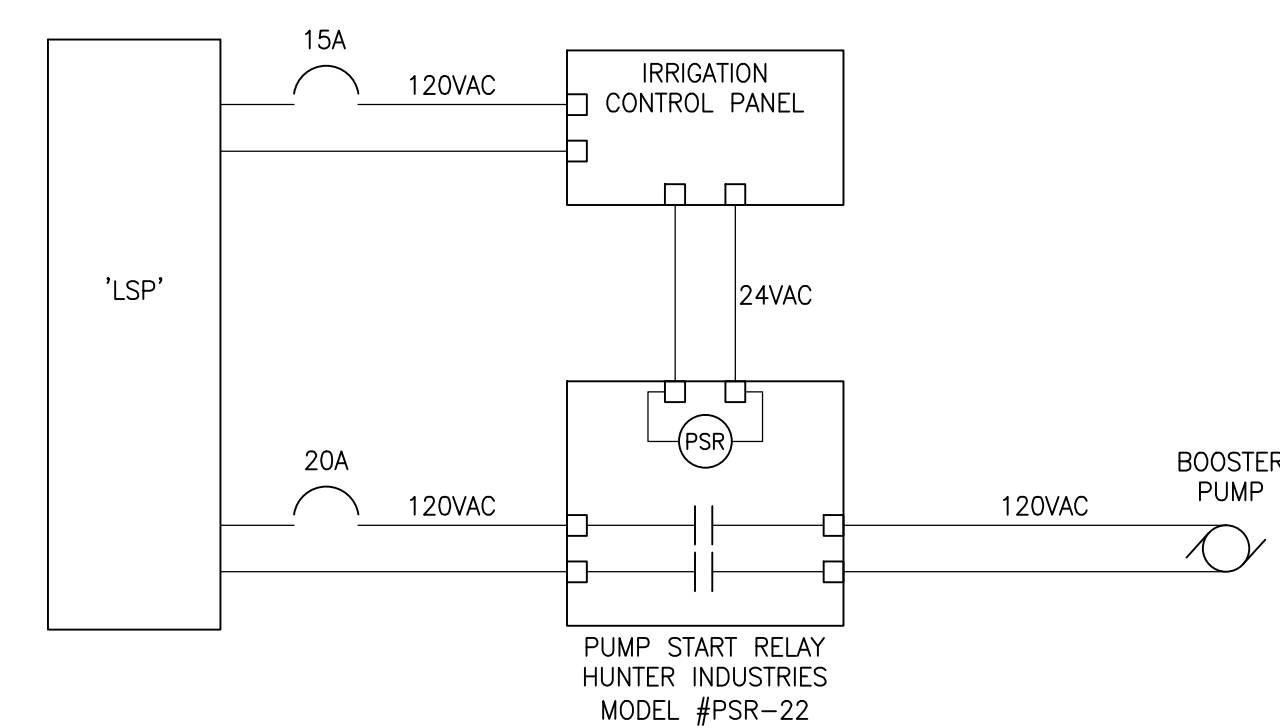


LIGHTING SERVICE PANEL  
FRONT ELEVATION  
NOT TO SCALE

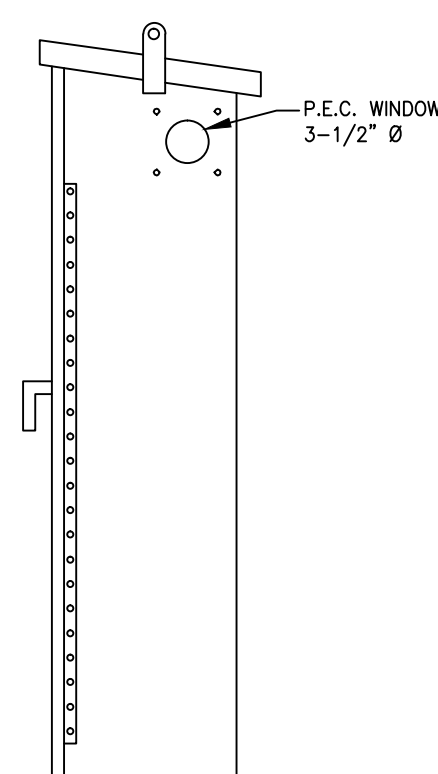
LIGHTING SERVICE PANEL  
INTERNAL ELEVATION  
NOT TO SCALE



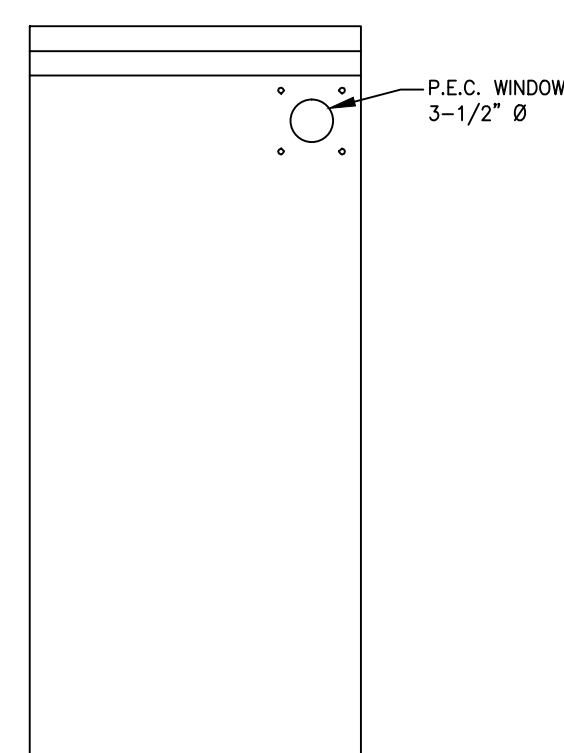
LIGHTING SERVICE PANEL  
LEFT ELEVATION  
NOT TO SCALE



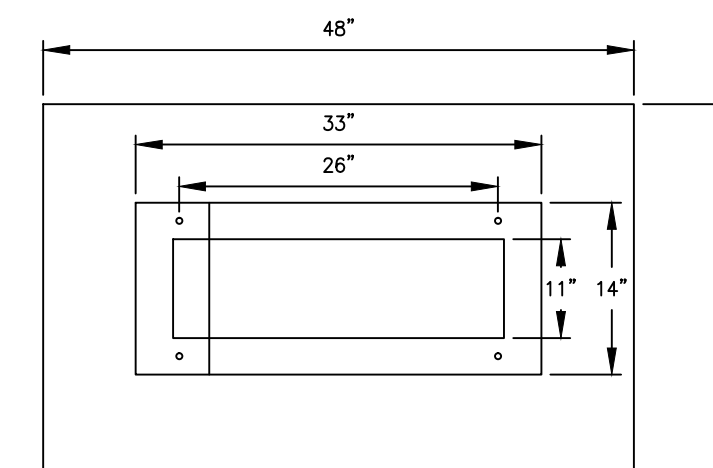
BOOSTER PUMP WIRING DIAGRAM



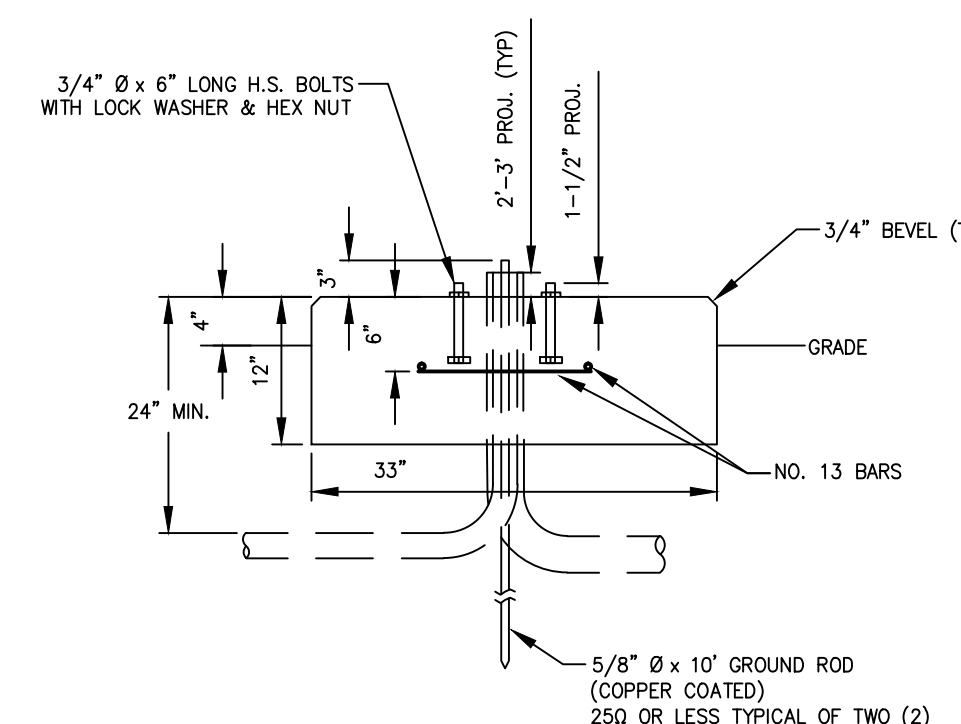
LIGHTING SERVICE PANEL  
RIGHT ELEVATION  
NOT TO SCALE



LIGHTING SERVICE PANEL  
BACK ELEVATION  
NOT TO SCALE

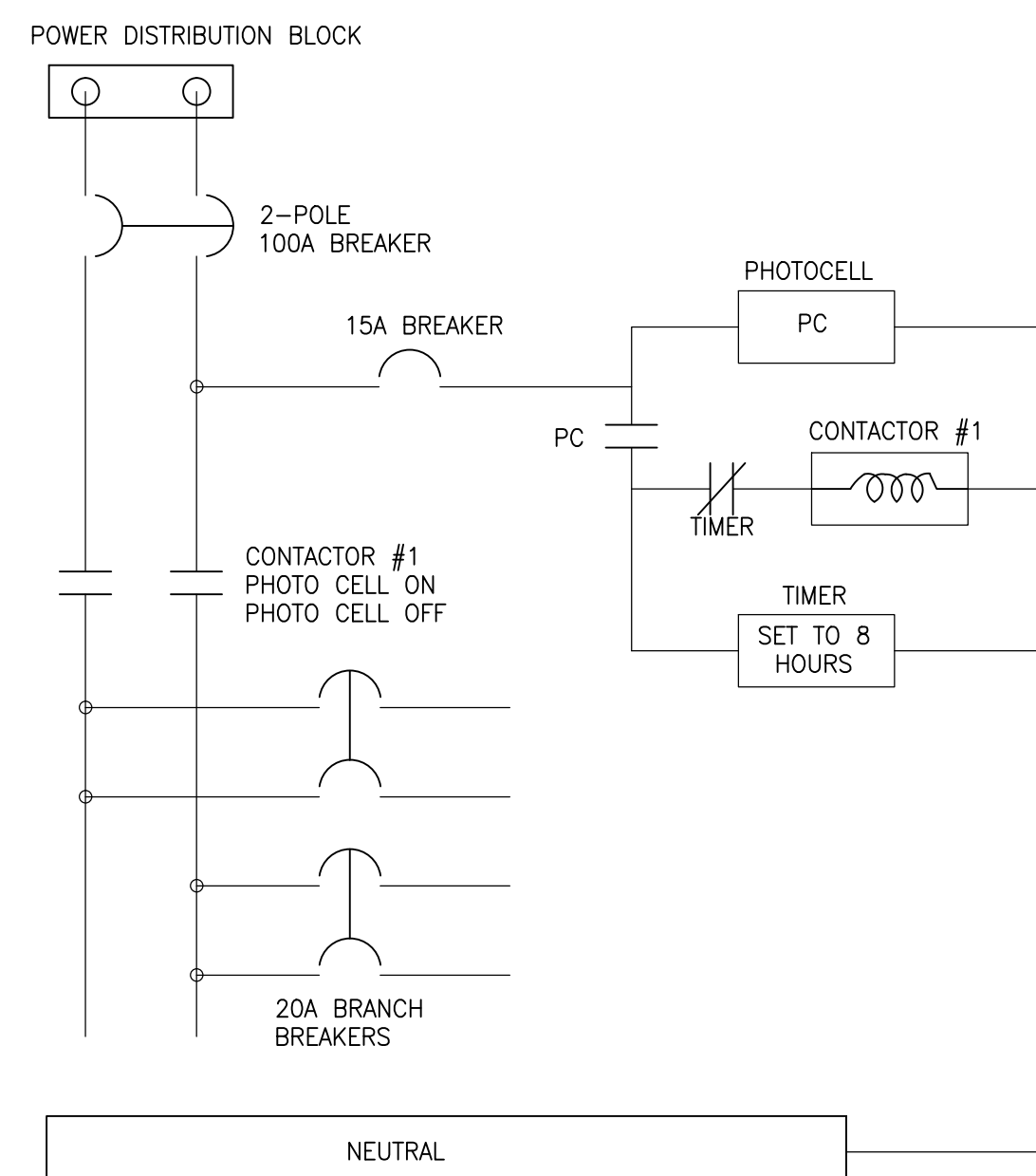


LIGHTING SERVICE PANEL  
MOUNTING PATTERN  
NOT TO SCALE

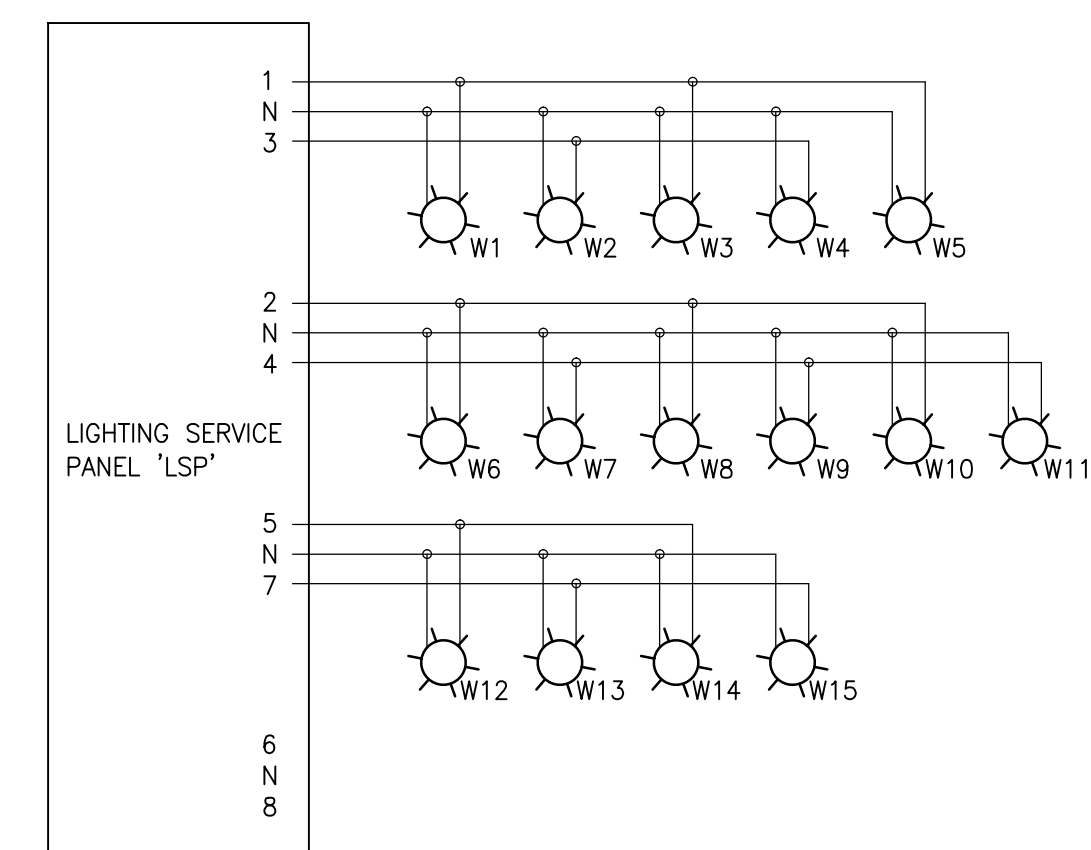


SERVICE PANEL FOUNDATION  
(MNDOT EQUIPMENT PAD B)  
NOT TO SCALE

PANEL NO.	MAIN CB AMPS	MAIN CB FRAME	MAIN LUGS ONLY		FEEDER SIZE	DESCRIPTION					
			PHASE	WIRE		LOCATION	FED FROM				
LSP	100	100	1	3	#3 AWG	NORTHERN PART OF PARK JUST OFF PATH		TRANSFORMER OFF BLAKE ROAD			
	BUS AMPS	VOLTS									
	100	120/240V	1	3							
	NEUTRAL BUS	GROUND BUS	MOUNTING			MFG		TYPE	KAIC		
	X	X									
SURFACE											
CIRCUIT DESCRIPTION		CKT NO	BREAKERS		VA	BUS		BREAKERS		CKT NO	CIRCUIT DESCRIPTION
NORTH WALKWAY LIGHTING CKT 1		1	20	2	385	A	B	VA	20	2	SOUTH WALKWAY LIGHTING CKT 2
NORTH WALKWAY LIGHTING CKT 3		3	20	2	260			385	20	2	SOUTH WALKWAY LIGHTING CKT 4
ALLEYWAY LIGHTING CKT 5		5	20	2	260						
ALLEYWAY LIGHTING CKT 7		7	20	2	260						
CONTROLS CKT		9	15	1	100			200	20	1	IRRIGATION CONTROLS
IRRIGATION BOOSTER PUMP		11	20	1	1740						
		13									
		15									
		17									
		19									
		21									
		23									
1330	TOTAL VA/ØA:										
2845	TOTAL VA/ØB:										
3975	TOTAL VA:										
16.56	LINE AMPS										



LIGHTING SERVICE PANEL  
CONTROLS SCHEMATIC



LIGHTING CIRCUITS WIRING DIAGRAM