

Ypsilanti District Library

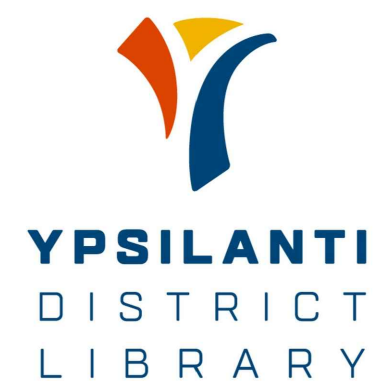
Superior Township Branch

Final Site Plan Approval

Review Package

November 25, 2020

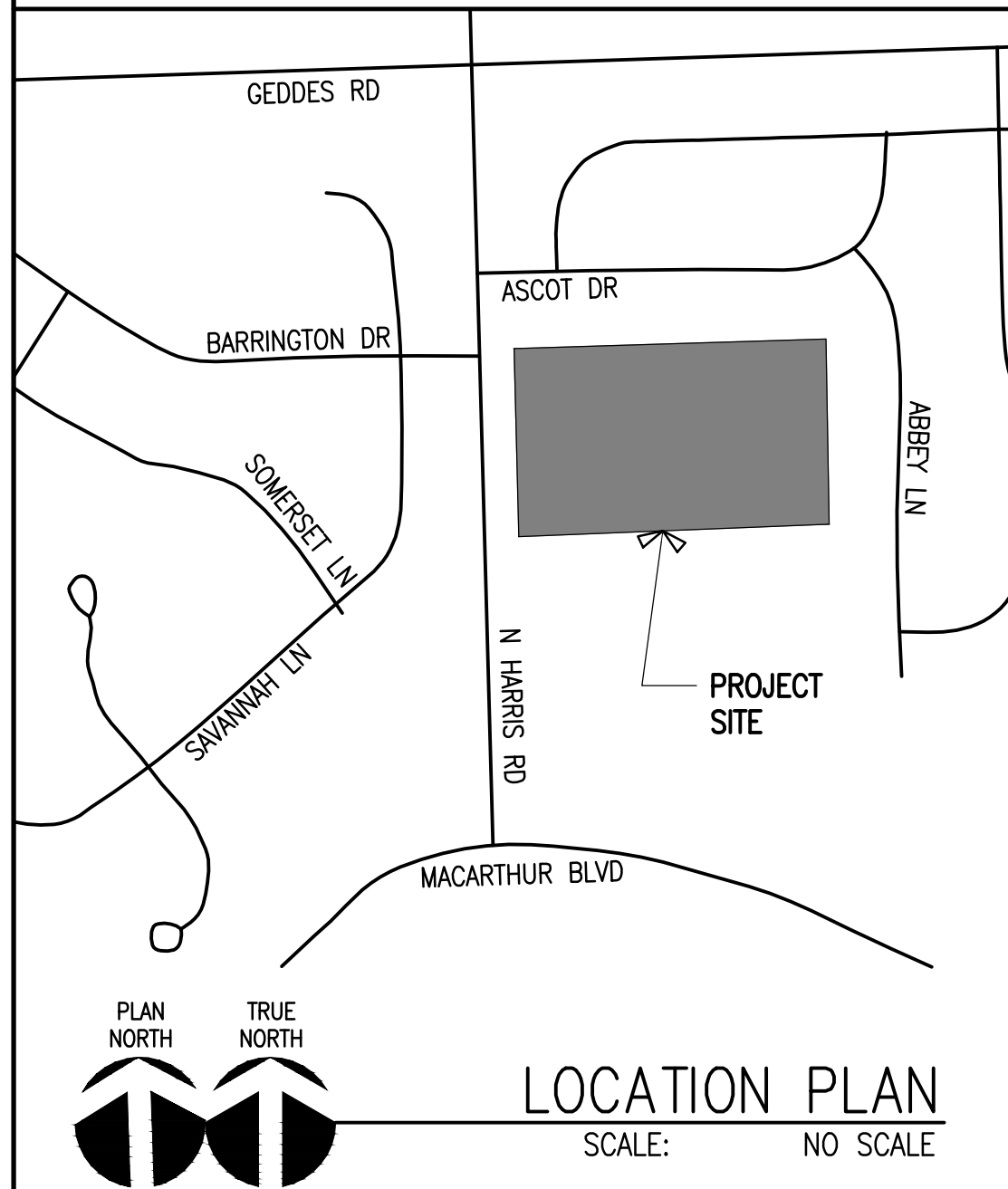




Ypsilanti District Library

Superior Township Branch

LOCATION MAP



PROJ. DESCRIP.

YPSILANTI DISTRICT LIBRARY – SUPERIOR TWP BRANCH
N HARRIS ROAD
SUPERIOR CHARTER TWP, MICHIGAN 48198

THE SITE IS PROPOSED TO BE DEVELOPED FOR A NEW 8,041 SF, SINGLE STORY PUBLIC LIBRARY BUILDING WITH ASSOCIATED PARKING AND SITE DEVELOPMENT.

BUILDING DATA

USE GROUP: GROUP "A-3" ASSEMBLY

PROJECT AREA: 8,041 SQ FT +/- (GROSS); 7,143 SQ FT +/- (NET)

NUMBER OF STORIES: 1

BUILDING HEIGHT: 33'-5"

CONSTRUCTION TYPE: II-B

OCCUPANT LOAD: 133

FIRE SUPPRESSION: YES

CONSTRUCTION SCHEDULE: ANTICIPATED START OF CONSTRUCTION: OCT 2020
ANTICIPATED COMPLETION OF CONSTRUCTION: OCT 2021

CODE INFORMATION

- MICHIGAN BUILDING CODE - 2015
- MICHIGAN PLUMBING CODE - 2015
- MICHIGAN MECHANICAL CODE - 2015
- MICHIGAN ENERGY CODE - 2015
- NATIONAL ELECTRIC CODE - 2017
- INTERNATIONAL FIRE CODE - 2015
- FIRE ALARM SYSTEMS - NFPA 72
- ICC/ANSI A117.1 - MICHIGAN BARRIER FREE DESIGN LAW

SITE DATA

PROPOSED USE: PUBLIC LIBRARY

ZONING DISTRICT: PSP PUBLIC/SEMI-PUBLIC SERVICES DISTRICT
REFER TO CIVIL AND LANDSCAPE DRAWINGS FOR ADDITIONAL SITE DATA

PROJECT SITE AREA: 134,989 SF (3.1 AC)

PERCENTAGE OF LOT COVERAGE: 7%

FLOOR AREA RATIO: 0.07

LEGAL DESCRIP.

EXISTING PARENT PARCEL TO BE SPLIT FOR NEW LIBRARY PARCEL PER LIBRARY-TOWNSHIP AGREEMENT

REFER TO SHEET C1.1 PROPERTY LEGAL DESCRIPTION

UTILITY TABLES

SANITARY QUANTITY TABLE	WATERMAIN QUANTITY TABLE
8" PVC SDR 26: 405 LF	8" CL 54 DIP: 95 LF
HYDRANT: 3 EA	HYDRANT: 1 EA
MANHOLES: 3 EA	TS+GVWV: 1 EA

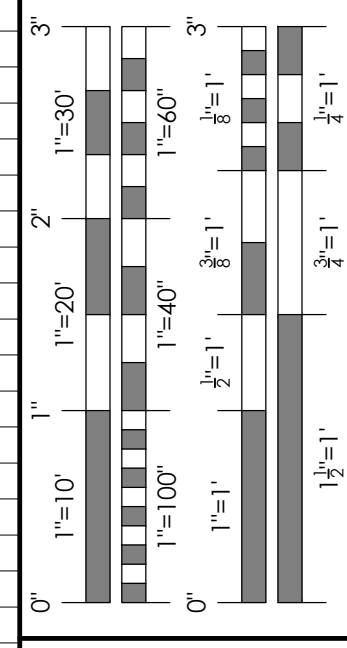
DRAWING INDEX

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YPSILANTI DISTRICT LIBRARY
SUPERIOR TOWNSHIP BRANCH



DANIELS AND ZERMACK ARCHITECTS
2080 S. State Street
Ann Arbor, MI 48104
O 734.761.2090
F 734.761.6607



REVISIONS

PRELIM. SITE PLAN APPROVAL 21 FEB 2020
DESIGN DEVELOPMENT 20 MAY 2020
ISSUED FOR RP#1-SECC & SITE CLEARING 11 SEPT 2020
FINAL SITE PLAN APPROVAL 25 SEPT 2020
FINAL SITE PLAN APPROVAL & WCMRG REVIEW 03 NOV 2020
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DIRECTORY

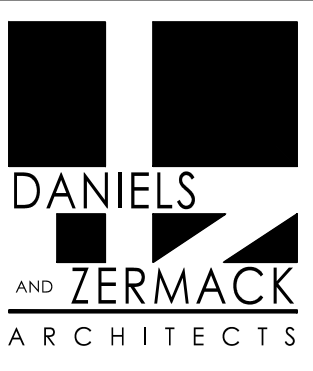
GEOTECHNICAL CONSULTANT G2 CONSULTING GROUP 1350 EISENHOWER PL ANN ARBOR, MI 48108 (734) 390-9330 FAX (734) 390-9331	CIVIL ENGINEER/LANDSCAPE BECKETT & RAEDER INC 535 W WILLIAM ST #101 ANN ARBOR, MI 48103 (734) 663-2622 FAX (734) 663-6759	CONSTRUCTION MANAGER O'NEAL CONSTRUCTION, INC 525 W WILLIAM ST ANN ARBOR, MI 48103 (734) 769-0770 FAX (734) 769-1736	ARCHITECT DANIELS AND ZERMACK ARCHITECTS, LLC 2080 S STATE ST ANN ARBOR, MI 48104 (734) 761-2090 FAX (734) 761-6607	PROJECT OWNER YPSILANTI DISTRICT LIBRARY 5577 WHITTAKER RD YPSILANTI, MICHIGAN 48197 (517) 333-2254 FAX (517) 333-2227
MECHANICAL/ELECTRICAL ENGINEER & LIGHTING CONSULTANTS STRATEGIC ENERGY SOLUTIONS 4000 W ELEVEN MILE RD BERKLEY, MI 48072 (248) 399-1900		STRUCTURAL ENGINEER SDI STRUCTURES 275 E LIBERTY RD. ANN ARBOR, MI 48104 (734) 213-6091 FAX (734) 213-6087	INTERIOR DESIGNER DANIELS AND ZERMACK ARCHITECTS, LLC 2080 S STATE ST ANN ARBOR, MI 48104 (734) 761-2090 FAX (734) 761-6607	PROJECT ADDRESS YPSILANTI DISTRICT LIBRARY N HARRIS RD (BETWEEN GEDDES RD AND MACARTHUR BLVD) SUPERIOR CHARTER TWP, MI 48198



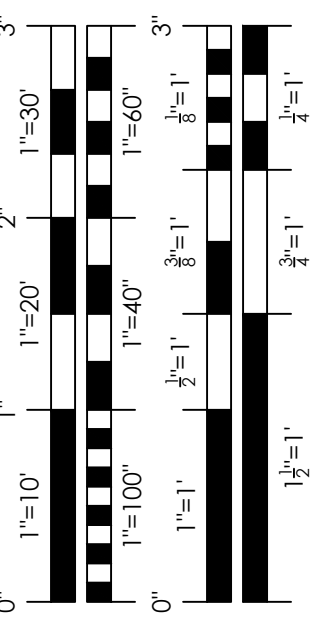
JOB 2017-55
DATE 03 NOV 2020
DRAWN DSS
CHECKED DEW
DETAIL SYMBOL
DETAIL NUMBER
REFERENCE SHEET

T1.1
YDL SUPERIOR

TITLE SHEET



2080 S. State Street
Ann Arbor, MI 48104
O 734.761.2090
F 734.761.6607



REVISIONS	
PRELIM. SITE PLAN APPROVAL	21 FEB 2020
SEC & SITE CLEARING	11 SEPT 2020
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JOB	2017-55
DATE	25 SEPT 2020
DRAWN	BB
CHECKED	BB
DETAIL SYMBOL	
DETAIL NUMBER	
REFERENCE SHEET	

811	Know what's below. Call before you dig.
CAUTION: FIELD VERIFY ALL UTILITIES PRIOR TO EXCAVATION.	

C1.0
YDL SUPERIOR

EXISTING CONDITIONS NOTES

- CONTRACTOR SHALL CALL MISS DIG (811) A MINIMUM OF THREE WORKING DAYS PRIOR TO START OF CONSTRUCTION.
- CONTRACTOR SHALL INVESTIGATE EXTENT AND LOCATION OF ALL EXISTING UTILITIES AND SHALL BE RESPONSIBLE FOR PROTECTION AND RESTORATION OF SAME IF DAMAGED AS A RESULT OF CONTRACTOR'S OPERATIONS.
- CONTOUR INTERVAL SHOWN IS 1-FOOT.

EXISTING CONDITIONS LEGEND

---	PROPERTY LINE	☐	PHONE RISER
---	RIGHT-OF-WAY / SETBACK LINE	○ ^S	SIGN
---	MINOR CONTOUR	○ ^S STOP	STOP SIGN
---	MAJOR CONTOUR	⊙	SANITARY SEWER MANHOLE
▲	SPOT GRADE	☐ ^{TR}	TRANSFORMER
△	BENCHMARK	⊕	UTILITY POLE
⊕	BORING LOCATION	⊕	WATER MANHOLE
⊕	CATCH BASIN - ROUND	⊕ ^{WV}	WATER VALVE
⊕	CATCH BASIN - SQUARE	— G —	GAS
⊕	CABLE RISER	— OH —	OVERHEAD UTILITY
⊕	DECIDUOUS TREE	— X — X —	FENCE
⊕	EVERGREEN TREE	— SS —	SANITARY
⊕	GAS RISER	— ST —	STORM
⊕	HYDRANT	— UT —	UNDERGROUND TELEPHONE
●	IRON - SET	— W —	WATERMAIN
○	IRON - FOUND	— C —	CABLE TV
⊕	LIGHT POLE	— UE —	UNDERGROUND ELECTRIC

SURVEY PREPARED BY:

DATE OF PLAT OR MAP: JANUARY 25, 2019

Brandon G. Parrent
BRANDON G. PARRENT
PROFESSIONAL SURVEYOR NO. 63096

NEDERVELD, INC.
NPARRENT@NEDERVELD.COM

SURVEYOR'S NOTES

- ALTA TABLE "A" ITEM NO. 3 - FLOOD ZONE CLASSIFICATION: AN EXAMINATION OF THE NATIONAL FLOOD INSURANCE PROGRAM'S FLOOD INSURANCE RATE MAP INDEX MAP NUMBER 26161C/D/OA, WITH AN EFFECTIVE DATE OF APRIL 3, 2012, SHOWS FOR COMMUNITY NUMBER 26161C, PANEL NUMBER 0290E, THAT THE PANEL WAS NOT PRINTED. NO FIELD SURVEYING WAS PERFORMED TO DETERMINE THIS ZONE.
- ALTA TABLE "A" ITEM NO. 4 - GROSS LAND AREA: 524,467 SQUARE FEET / 12.0 ACRES
- ALTA TABLE "A" ITEM NO. 6(A) - ZONING CLASSIFICATION - A-2 RURAL AGRICULTURAL DISTRICT, PER SUPERIOR TOWNSHIP BUILDING AND ZONING DEPT.
- ALTA TABLE "A" ITEM NO. 7(B)(1) - NO BUILDINGS OBSERVED.
- ALTA TABLE "A" ITEM NO. 7(C) - NO BUILDINGS OBSERVED.
- ALTA TABLE "A" ITEM NO. 9 - PARKING INFORMATION - NO PARKING SPACES OBSERVED.
- ALTA TABLE "A" ITEM NO. 16 - EVIDENCE OF RECENT EARTH MOVING WORK, BUILDING CONSTRUCTION OR BUILDING ADDITIONS OBSERVED IN THE PROCESS OF CONDUCTING THE FIELDWORK. NONE OBSERVED AT TIME OF SURVEY.
- ALTA TABLE "A" ITEM NO. 17 - PROPOSED CHANGES IN STREET RIGHT OF WAY LINES, IF SUCH INFORMATION IS MADE AVAILABLE TO THE SURVEYOR BY THE CONTROLLING JURISDICTION, EVIDENCE OF RECENT STREET OR SIDEWALK CONSTRUCTION OR REPAIRS OBSERVED IN THE PROCESS OF CONDUCTING THE FIELDWORK. NONE OBSERVED AT TIME OF SURVEY.
- EASEMENT FOR WATERMAIN RECORDED LIBER 1761, PAGE 417, WASHENAW COUNTY RECORDS. THE EASEMENT DESCRIBED IN THIS DOCUMENT IS SHOWN ON THIS SURVEY.
- EASEMENT FOR UTILITIES RECORDED ON GEDDES RIDGE SUBDIVISION AND GEDDES RIDGE SUBDIVISION NO. 2, WASHENAW COUNTY RECORDS. THE EASEMENT DESCRIBED IN THIS DOCUMENT IS SHOWN ON THIS SURVEY.
- BASIS OF BEARING: MICHIGAN STATE PLANE COORDINATES, SOUTH ZONE 2113.
- NOTE TO THE CLIENT, INSURER, AND LENDER - WITH REGARD TO TABLE A, ITEM 11, SOURCE INFORMATION FROM PLANS AND MARKINGS WILL BE COMBINED WITH OBSERVED EVIDENCE OF UTILITIES PURSUANT TO SECTION 5.4.I.V. TO DEVELOP A VIEW OF THE UNDERGROUND UTILITIES. HOWEVER, LACKING EXCAVATION, THE EXACT LOCATION OF UNDERGROUND FEATURES CANNOT BE ACCURATELY, COMPLETELY, AND RELIABLY DEPICTED. IN ADDITION, IN SOME JURISDICTIONS, 811 OR OTHER SIMILAR UTILITY LOCATE REQUESTS FROM SURVEYORS MAY BE IGNORED OR RESULT IN AN INCOMPLETE RESPONSE. WHERE ADDITIONAL OR MORE DETAILED INFORMATION IS REQUIRED, THE CLIENT IS ADVISED THAT EXCAVATION AND/OR A PRIVATE UTILITY LOCATE REQUEST MAY BE NECESSARY.
- NOTE TO CONTRACTORS: 3 (THREE) WORKING DAYS BEFORE YOU DIG, CALL MISS DIG AT TOLL FREE 1-800-482-7171 FOR UTILITY LOCATIONS ON THE GROUND.
- THIS TOPOGRAPHIC SURVEY WAS PERFORMED DURING A PERIOD OF SNOW AND ICE COVERING. WHILE EVERY EFFORT WAS MADE TO LOCATE ALL FEATURES, SNOW AND/OR ICE MAY HAVE PREVENTED ALL FEATURES FROM BEING VISIBLE.

BENCHMARK DESCRIPTIONS

BENCHMARK #261 ELEV. = 767.03 (NAVD 88)
TOP OF EAST BOLT ON HYDRANT, LOCATED 8'± EAST OF EDGE OF ASPHALT & 156'± NORTH OF CENTERLINE OF BARRINGTON DRIVE.

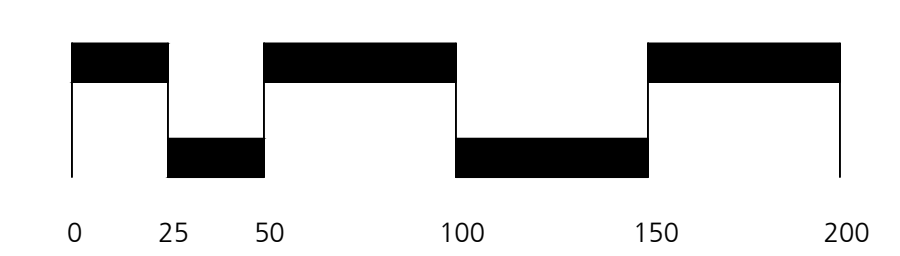
BENCHMARK #263 ELEV. = 764.31 (NAVD 88)
TOP OF SOUTHEAST BOLT ON HYDRANT, LOCATED 14'± EAST OF EDGE OF ASPHALT & 84'± OF SOUTHERLY PROPERTY LINE OF OUR PROPERTY.

PROPERTY LEGAL DESCRIPTION

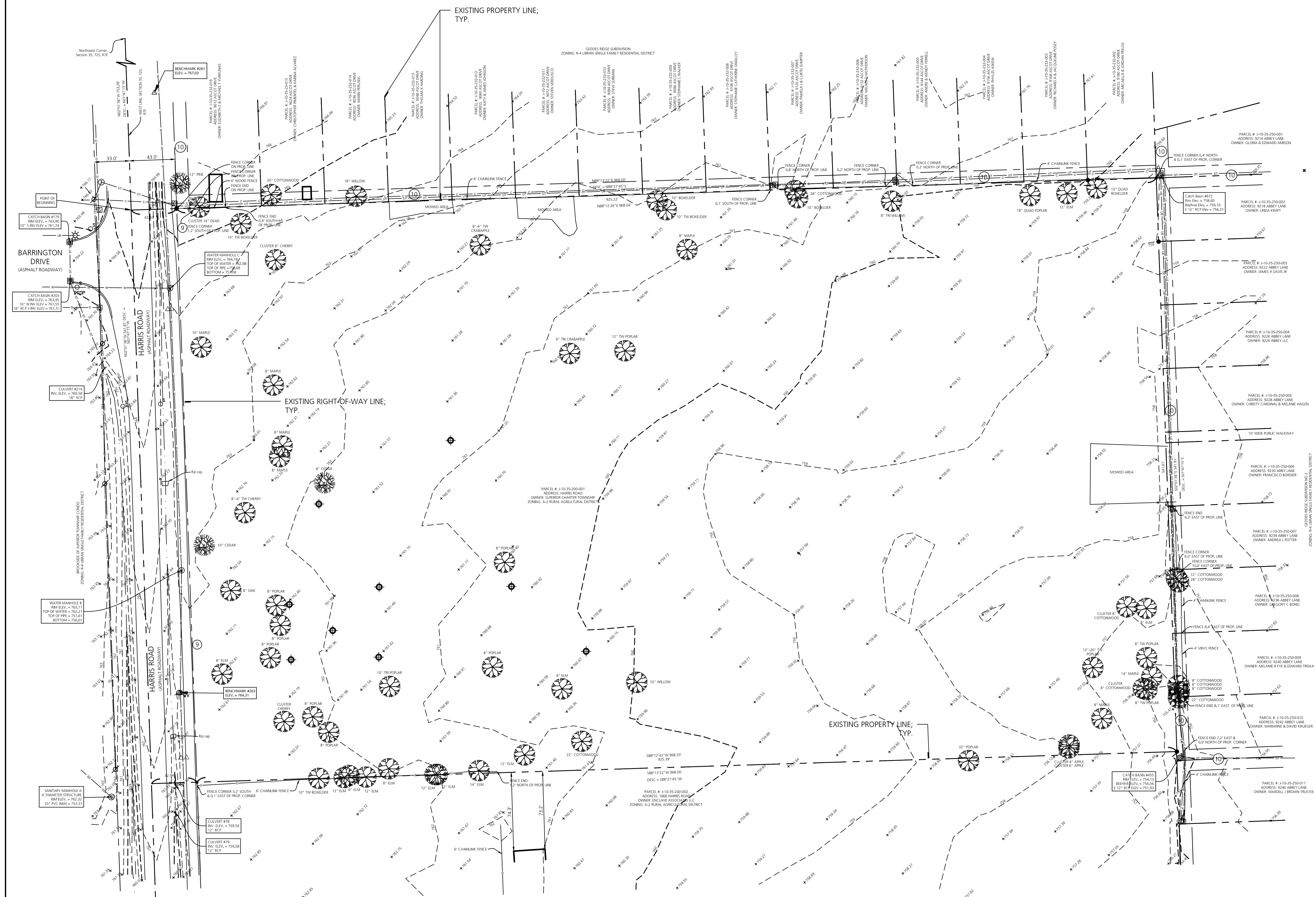
THE LAND SITUATED IN THE STATE OF MICHIGAN, COUNTY OF WASHENAW, TOWNSHIP OF SUPERIOR, PART OF THE NORTHWEST 1/4 SECTION OF 35, TOWN 2 SOUTH, RANGE 7 EAST.

*OLD SID - J 10-035-007-00 SU 35-58 COM AT NW COR OF SEC 35, TH S 1-47-15 E 753.28 FT ON VWL OF SEC TO POB, TH N 88-27-45 E 968 FT, TH S 1-47-15 E 541.81 FT TH S 88-27-45 W 968 FT, TH N 1-47-15 W 541.81 FT TO POB PART NW 1/4 SEC 35 T2S R7E 12.04 AC

PROPERTY LOCATION MAP



EXISTING CONDITIONS PLAN - OVERALL

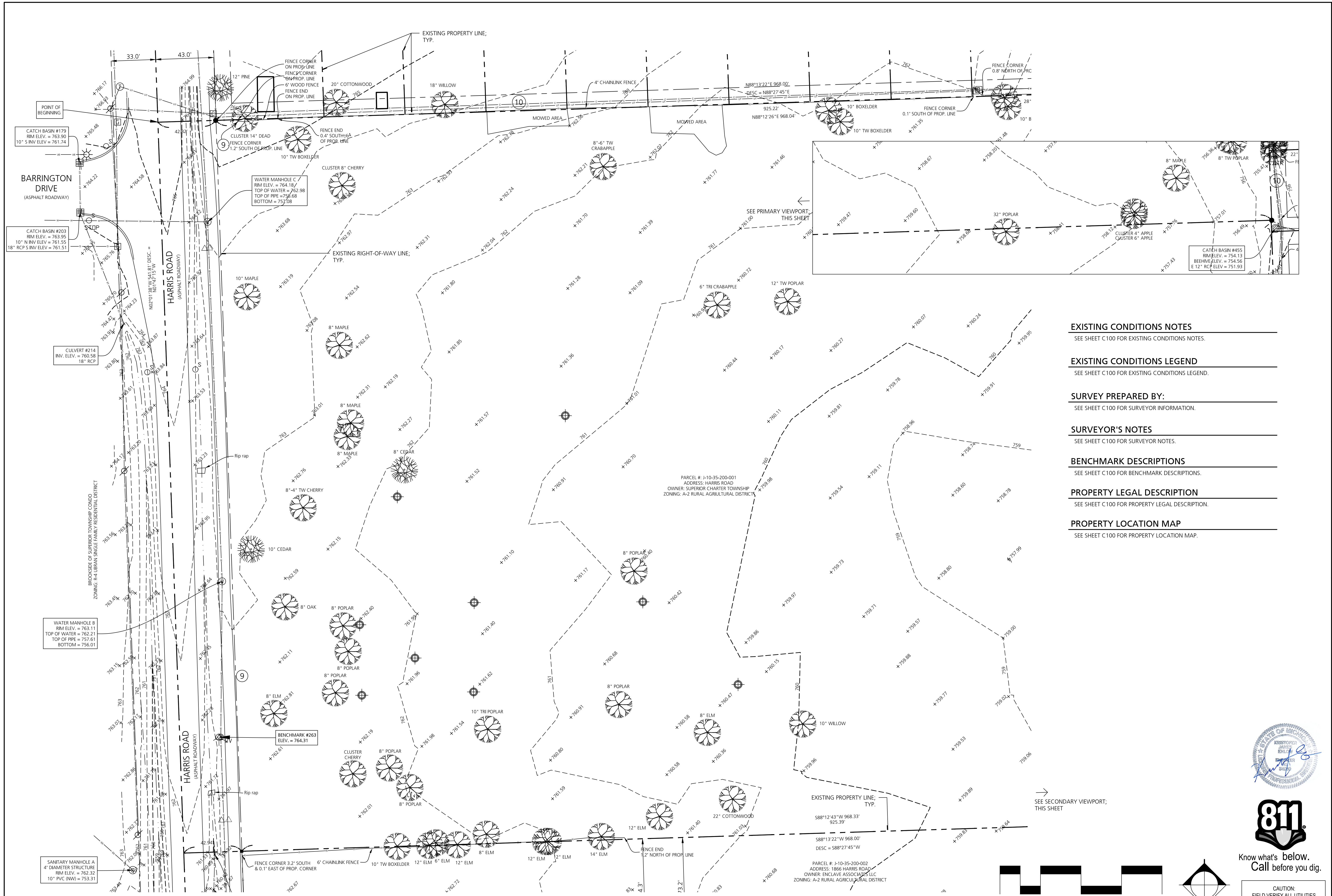


TREE PRESERVATION AND REPLACEMENT

- NO LANDMARK OR SOVEREIGN TREES ARE PRESENT ON THE LIBRARY OR TOWNSHIP PARCELS.
- A TOTAL OF 26 REGULATED TREES ARE PRESENT ON THE TOWNSHIP PARCEL. 6 ARE PROPOSED FOR REMOVAL, AND 20 WILL BE PROTECTED (77%). REFER TO DEMOLITION & SESC PLAN.
- A TOTAL OF 27 REGULATED TREES ARE PRESENT ON THE LIBRARY PARCEL. 18 ARE PROPOSED FOR REMOVAL, AND 9 WILL BE PROTECTED (33%). REFER TO DEMOLITION & SESC PLAN.
 - 11 REMOVED TREES DO NOT REQUIRE REPLACEMENT DUE TO SPECIES (2 CEDAR, 9 COTTONWOOD/POPLAR).
 - 7 TREES REQUIRE REPLACEMENT AT A 1:1 RATIO BASED ON 8-12" DBH: (2) 8" CHERRY, (1) 8" MAPLE, (1) 8" OAK, (2) 8" ELM, (1) 10" WILLOW. A TOTAL TREE REPLACEMENT TREE QUANTITY OF 7 IS REQUIRED. REFER TO LANDSCAPE PLAN FOR REPLACEMENT TREES.

INVASIVE SPECIES STATEMENT

THE PROJECT SITE WAS PREVIOUSLY USED FOR AGRICULTURE AND HAS BEEN FALLOW FOR A NUMBER OF YEARS. VEGETATION PRESENTLY CONSISTS OF LOW QUALITY SUCCESSIONAL GROWTH, INCLUDING NUMEROUS INVASIVE SPECIES SUCH AS HONEYSUCKLE, BUCKTHORN, AND AUTUMN OLIVE. THE PROJECT PROPOSES TO CLEAR INVASIVE SPECIES (INCLUDING STUMPS) FROM THE ENTIRE LIBRARY PARCEL AND A PORTION OF THE TOWNSHIP'S PARCEL. REFER TO DEMOLITION PLAN.



EXISTING CONDITIONS NOTES

SEE SHEET C100 FOR EXISTING CONDITIONS NOTES.

EXISTING CONDITIONS LEGEND

SEE SHEET C100 FOR EXISTING CONDITIONS LEGEND.

SURVEY PREPARED BY:

SEE SHEET C100 FOR SURVEYOR INFORMATION.

SURVEYOR'S NOTES

SEE SHEET C100 FOR SURVEYOR NOTES.

BENCHMARK DESCRIPTIONS

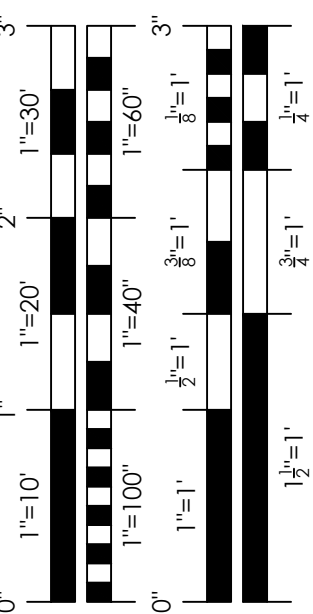
SEE SHEET C100 FOR BENCHMARK DESCRIPTIONS.

PROPERTY LEGAL DESCRIPTION

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PROPERTY LOCATION MAP

SEE SHEET C100 FOR PROPERTY LOCATION MAP.

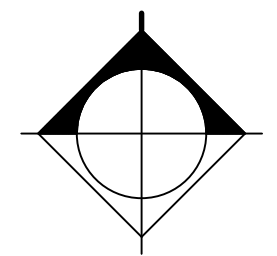
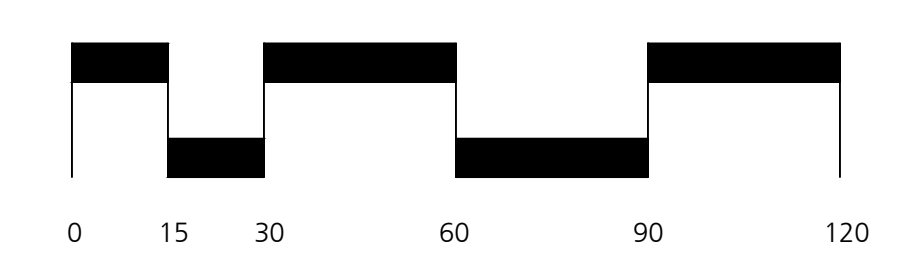


REVISIONS

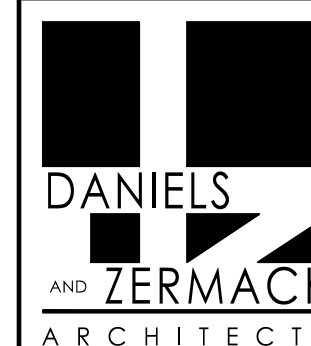
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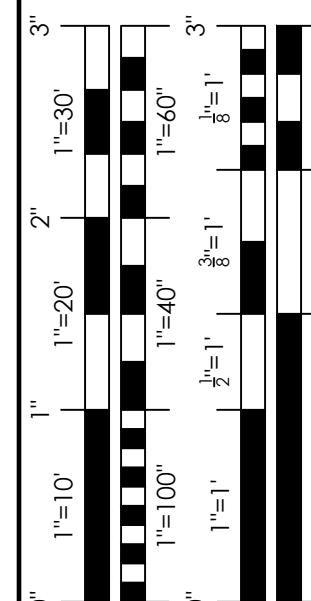
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EXISTING CONDITIONS PLAN



2080 S. State Street
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O 734.761.2090
F 734.761.6607



REVISIONS	
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JOB	2017-55
DATE	25 SEPT 2020
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C1.5
YDL SUPERIOR

PROPOSED PARCEL SPLIT

PARENT PARCEL
The land situated in the State of Michigan, County of Washtenaw, Township of Superior, part of the NorthWest 1/4 Section of 35, Town 2 South, Range 7 East.

*OLD SID - J 10-035-007-00 SU 35-58 COM AT NW COR OF SEC 35, TH S 1-47-15 E 753.28 FT ON W/LOF SEC TO POB, TH N 88-27-45 E 968 FT, TH S 1-47-15 E 541.81 FT TH S 88-27-45 W 968 FT, TH N 1-47-15 W 541.81 FT TO POB PART NW 1/4 SEC 35 T2S R7E 12.04 AC

NEW LIBRARY PARCEL
Part of the Northwest 1/4 of Section 35, Town 2 South, Range 7 East, Superior Township, Washtenaw County, Michigan, described as: Commencing at the Northwest corner of said Section; thence S02°01'38" E 980.59 feet along the West line of said Section to the Point of Beginning; thence N88°13'22" E 590.00 feet; thence S02°01'38" E 314.50 feet parallel with said West line; thence S88°13'22" W 590.00 feet; thence N02°01'38" W 314.50 feet along said West line to the Point of Beginning. Contains 4.26 acres. Subject to easements, restrictions, and rights of way of record. Also subject to highway right of way for Harris Road over the most Westerly 43.00 feet thereof.

REMAINING TOWNSHIP PARCEL
Part of the Northwest 1/4 of Section 35, Town 2 South, Range 7 East, Superior Township, Washtenaw County, Michigan, described as: Commencing at the Northwest corner of said Section; thence S02°01'38" E 753.28 feet along the West line of said Section to the Point of Beginning; thence N88°13'22" E 968.00 feet along the Southerly line of Geddes Ridge Subdivision, as recorded in Liber 21, Pages 75, 76, and 77, Washtenaw County Records; thence S02°01'38" E 541.81 feet along the Westerly line of Geddes Ridge Subdivision No. 2, as recorded in Liber 22, Pages 34, 35, and 36, Washtenaw County Records; thence S88°13'22" W 378.00 feet; thence N02°01'38" W 314.50 feet parallel with said West line; thence S88°13'22" W 590.00 feet; thence N02°01'38" W 227.31 feet along said West line to the Point of Beginning. Contains 7.74 acres. Subject to easements, restrictions, and rights of way of record. Also subject to highway right of way for Harris Road over the most Westerly 43.00 feet thereof.

LAYOUT & MATERIALS NOTES

SEE SHEET C3.0 FOR LAYOUT & MATERIALS NOTES.

LAYOUT & MATERIALS LEGEND

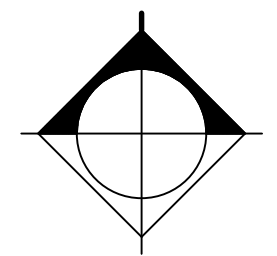
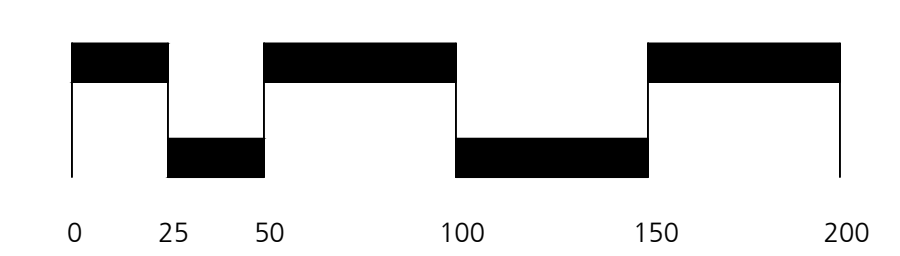
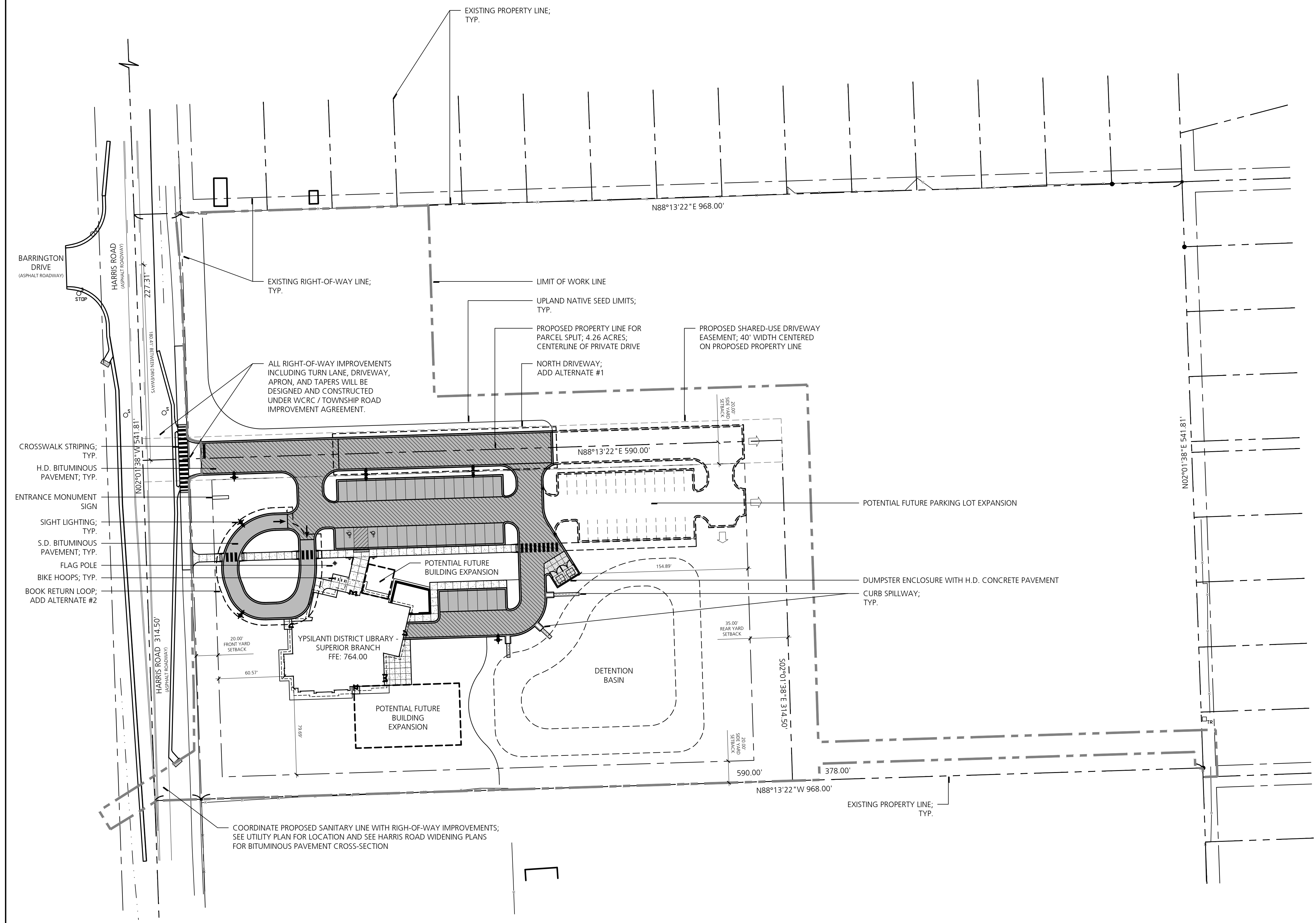
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PARKING SUMMARY

SEE SHEET C3.0 FOR PARKING SUMMARY.

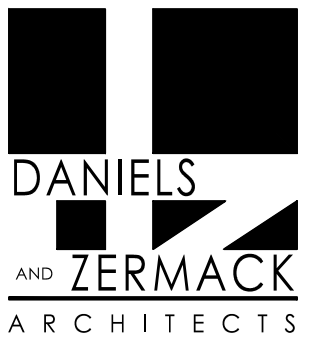
FROST FREE PAD NOTE

SEE SHEET C3.0 FOR FROST FREE PAD NOTE.

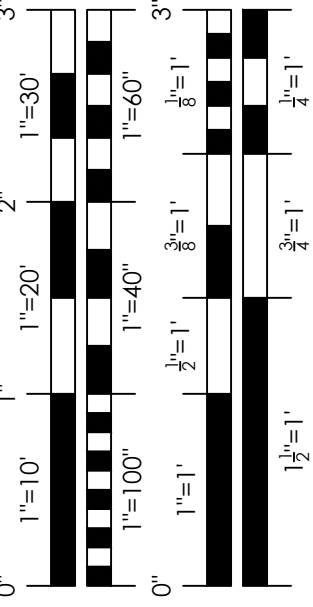


CAUTION:
FIELD VERIFY ALL UTILITIES
PRIOR TO EXCAVATION.

SITE PLAN - OVERALL



2080 S. State Street
Ann Arbor, MI 48104
O 734.761.2090
F 734.761.6607



REVISIONS

PRELIM. SITE PLAN APPROVAL	21 FEB 2020
SESC & SITE CLEARING	11 SEPT 2020
FINAL SITE PLAN APPROVAL	25 SEPT 2020
FINAL SITE PLAN APPROVAL & WVIC REVIEW	03 NOV 2020
FINAL SITE PLAN APPROVAL & WVIC REVIEW	25 NOV 2020
JOB	2017-55
DATE	25 SEPT 2020
DRAWN	BB
CHECKED	BB
DETAIL SYMBOL	

25 NOV 20

11/25/2020 11:26:37 AM

C:\USERS\KYRA VANDER MEULEN\BECKETT & RAEDER, INC\BRI LA - DOCUMENTS\YPSILANTI DISTRICT LIBRARY - SUPERIOR\DWG\02_CD\C2.0 DEMOLITION & SESC PLAN.DWG

NATURAL FEATURES NOTES

1. SITE CONTAINS SUCCESSIONAL SCRUB GROWTH OF < 8" DBH EXCEPT WHERE INDIVIDUAL TREES > 8" DBH ARE SURVEYED. SCRUB GROWTH SHALL BE CLEARED TO LIMITS INDICATED ON PLANS.
2. STEEP SLOPES, WATER BODIES, WATER COURSES, WETLANDS, 100-YEAR FLOODPLAIN, AND GROUNDWATER RECHARGE AREAS ARE NOT PRESENT ON SITE.

SITE CLEARING NOTES

1. CONTRACTOR SHALL CALL MISS DIG (811) A MINIMUM OF THREE WORKING DAYS PRIOR TO START OF CONSTRUCTION.
2. CONTRACTOR SHALL INVESTIGATE EXTENT AND LOCATION OF EXISTING UTILITIES AND SHALL BE RESPONSIBLE FOR PROTECTION AND RESTORATION OF SAME IF DAMAGED AS A RESULT OF CONTRACTOR'S OPERATIONS.
3. ALL ITEMS NOT INDICATED FOR REMOVAL SHALL REMAIN UNDISTURBED AND PROTECTED. CONTRACTOR SHALL FULLY RESTORE ANY ITEMS/MATERIALS DAMAGED DURING CONSTRUCTION AT NO ADDITIONAL COST TO THE OWNER.
4. TREES AND VEGETATION INDICATED FOR REMOVAL SHALL BE FULLY REMOVED INCLUDING STUMPS AND ROOTS LARGER THAN 2-INCH DIAMETER.
5. REMOVAL DEBRIS SHALL BECOME THE CONTRACTOR'S PROPERTY AND BE REMOVED FROM THE SITE FOR LEGAL DISPOSAL.
6. CONTRACTOR SHALL REPAIR ALL DISTURBED TURF AREAS OUTSIDE OF PROJECT LIMITS DAMAGED DURING CONSTRUCTION.
7. CONTRACTOR SHALL RELOCATE TREE PROTECTION FENCE WITH LANDSCAPE ARCHITECT/ENGINEER'S APPROVAL IN ORDER TO ACCOMPLISH WORK.
8. REMOVALS AROUND EXISTING TREES SHALL BE PERFORMED WITH EXTREME CARE. REMOVALS TO BE COMPLETED BY HAND. NO HEAVY EQUIPMENT ALLOWED BENEATH TREE CANOPY.
9. STORM DRAINS MUST BE PROTECTED FROM DUST AND DEBRIS.

TEMPORARY SESC STABILIZATION NOTES

1. CONTRACTOR SHALL "BUCKET GRADE" SITE FOR POSITIVE DRAINAGE FOLLOWING CLEARING AND GRUBBING OPERATIONS.
2. BUCKET GRADED CONDITION SHALL BE LIGHTLY SCARIFIED BEFORE TEMPORARY EROSION CONTROL SEEDING.
3. CONTRACTOR SHALL SEED ALL DISTURBED AREAS WITH MDOT "TSM" MIX.
4. ALL SEEDED AREAS SHALL RECEIVE STRAW MULCH OR HYDROMULCH PER MDOT APPLICATION RATES.
5. SLOPES GREATER THAN 3:1 SHALL RECEIVE STRAW EROSION CONTROL BLANKET WITH BIODEGRADABLE SINGLE NETTING.
6. SILT FENCE AND OTHER SESC CONTROLS SHALL NOT BE REMOVED UNTIL FULL ESTABLISHMENT OF TEMPORARY SEEDING AND APPROVAL OF JURISDICTIONAL AUTHORITY.

DEMOLITION LEGEND

	PROPERTY LINE
	RIGHT-OF-WAY / SETBACK LINE
	LIMIT OF WORK LINE
	FILTER FABRIC FENCE
	TREE PROTECTION FENCE
	MUD TRACKING MAT
	REMOVE EXISTING VEGETATION; (TREES, LAWN, BRUSH, ETC.)
	INLET FILTER
	REMOVE ITEM
	PROTECT ITEM
	SALVAGE ITEM TO OWNER
	REMOVE TREE

SEE SECONDARY VIEWPORT; THIS SHEET

SEE PRIMARY VIEWPORT; THIS SHEET

TREES & VEGETATION AS NECESSARY FOR PROPOSED STORM LINE; SEE UTILITY PLAN

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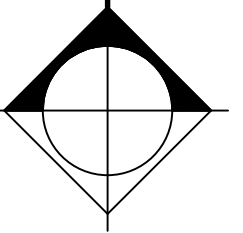
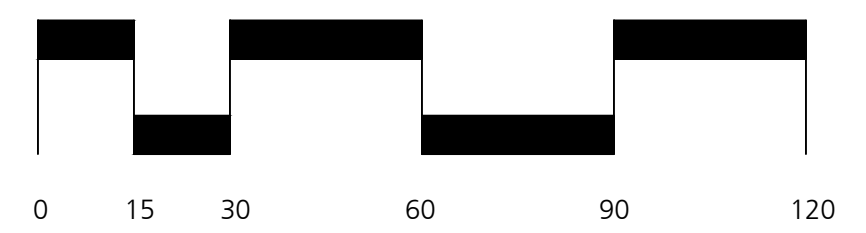
TREES & VEGETATION AS NECESSARY FOR PROPOSED STORM LINE; SEE UTILITY PLAN

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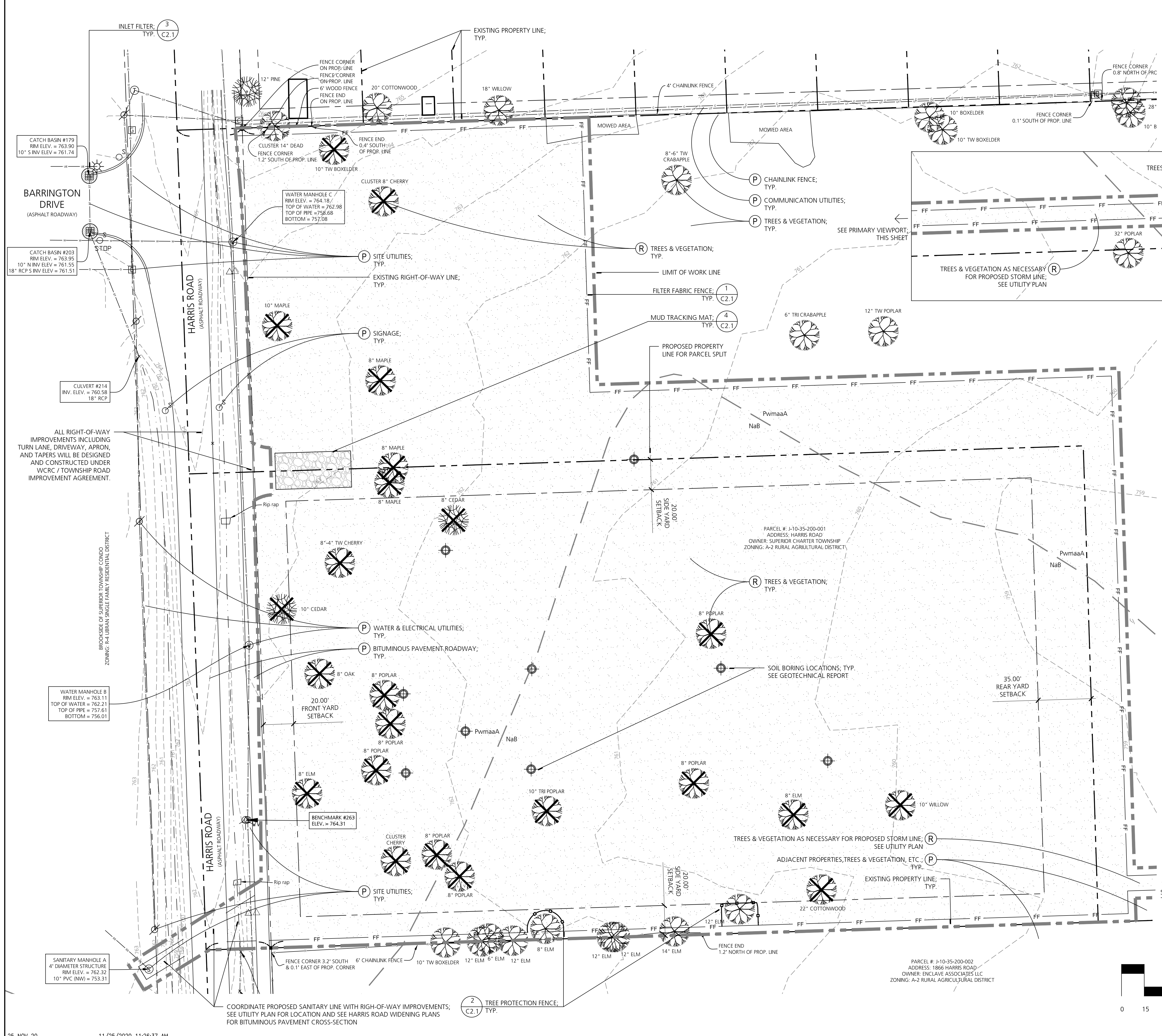
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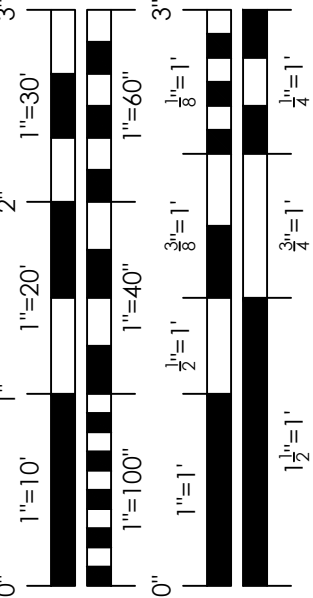


DEMOLITION & SESC PLAN

C2.0

YDL SUPERIOR



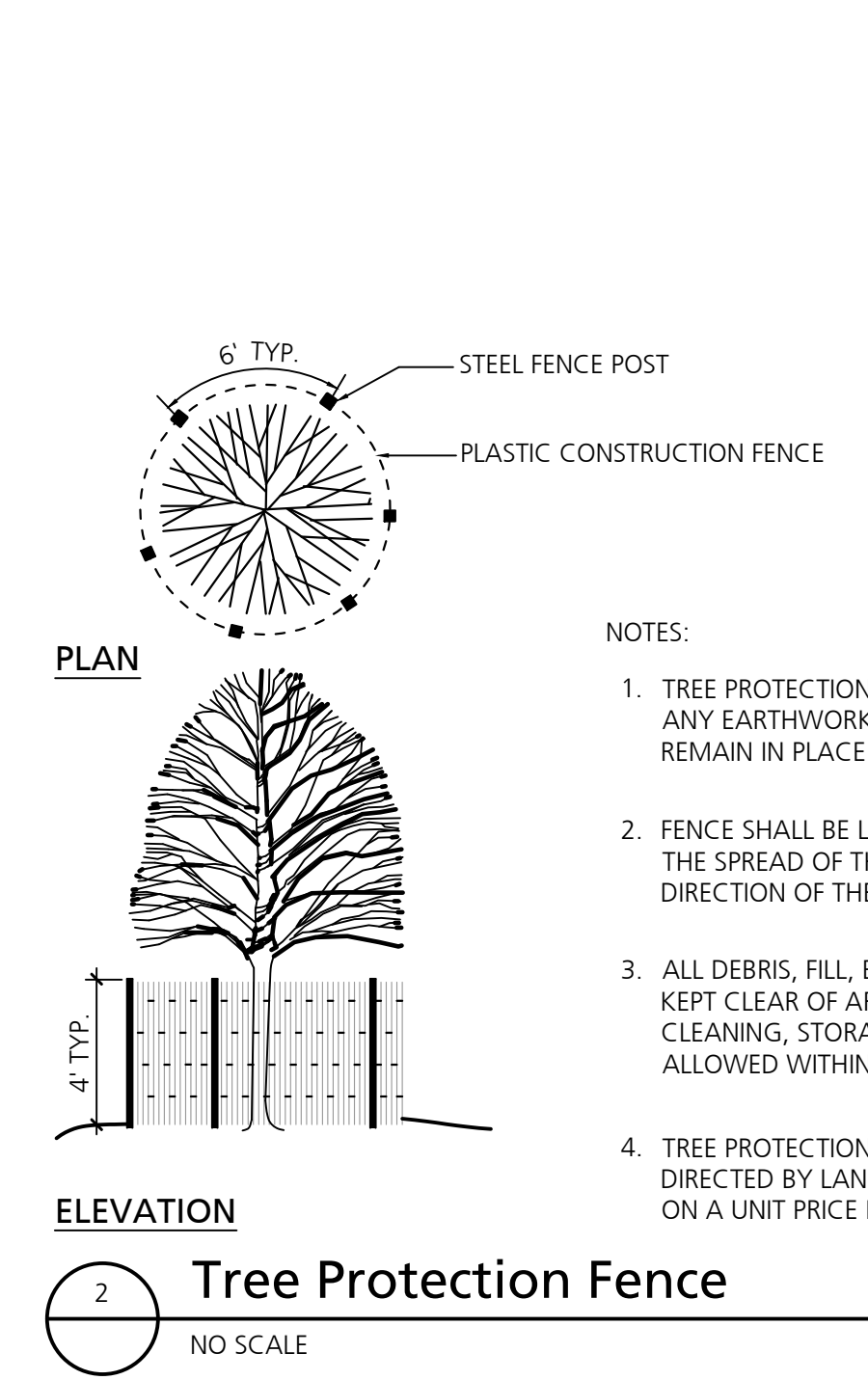
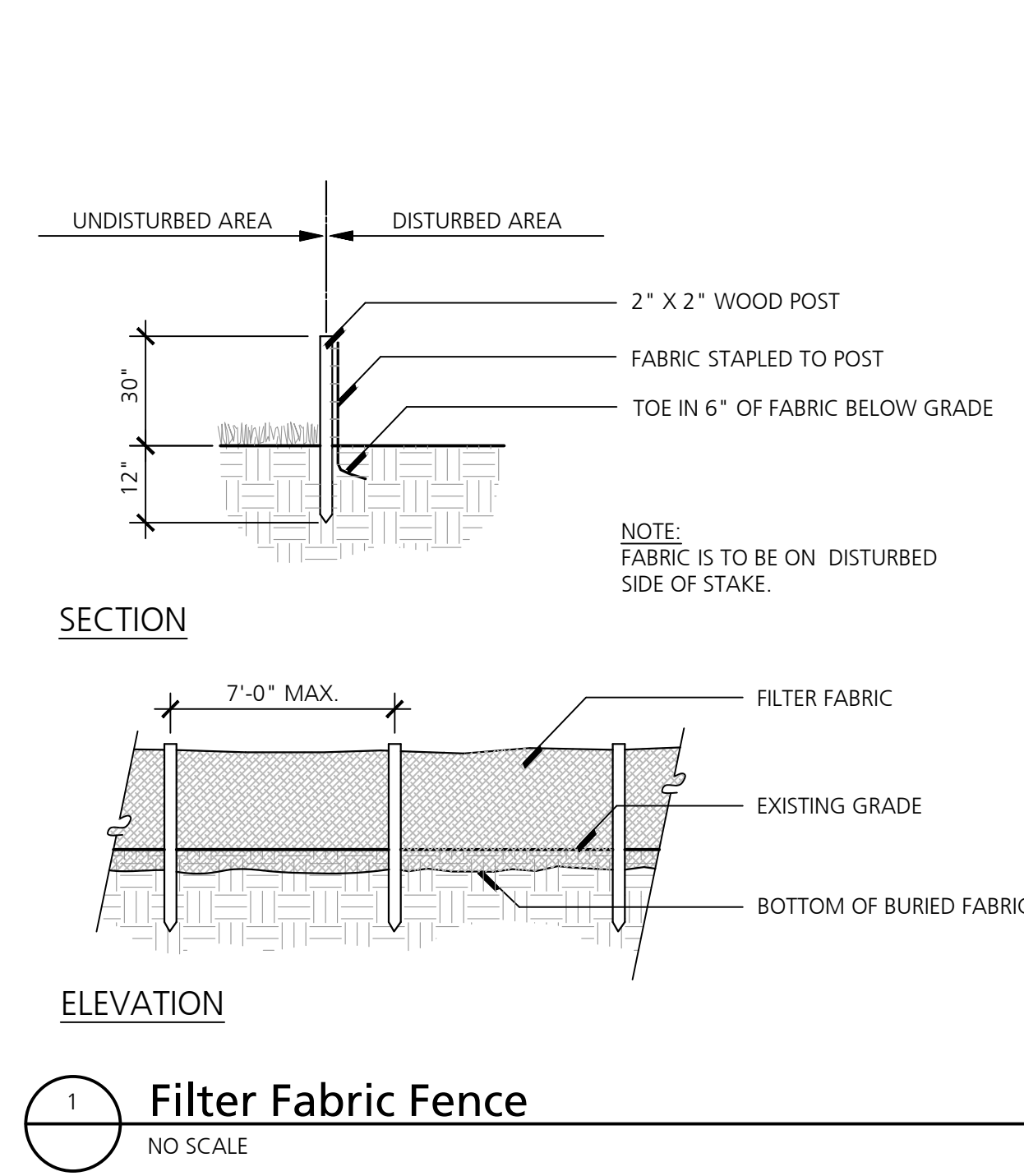


REVISIONS

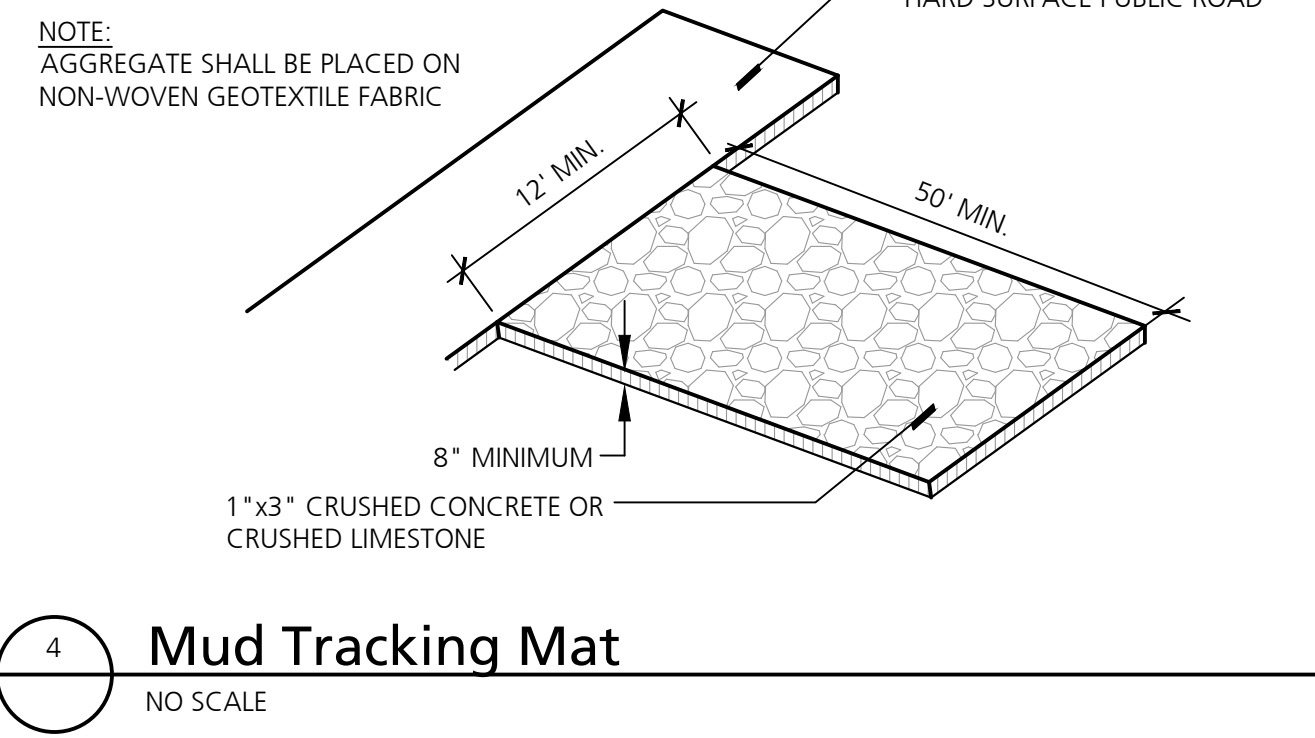
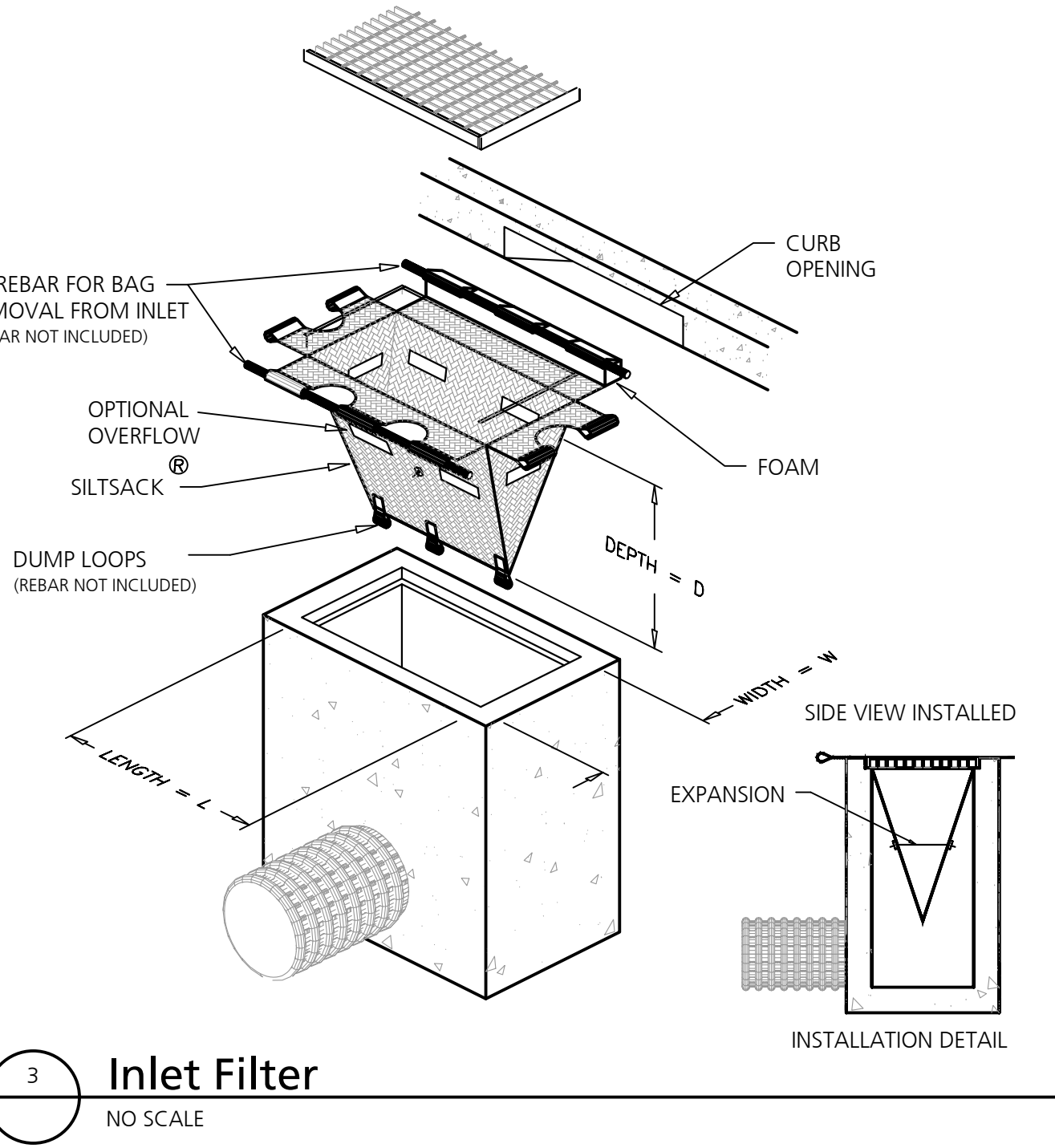
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CHECKED	BB

DETAIL SYMBOL	(CIRCLE WITH NUMBER)
DETAIL NUMBER	REFERENCE SHEET



- NOTES:
1. TREE PROTECTION FENCING SHALL BE ERECTED PRIOR TO ANY EARTHWORK OR CONSTRUCTION AND IS TO REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETE.
 2. FENCE SHALL BE LOCATED AT THE OUTER PERIMETER OF THE SPREAD OF THE BRANCHES OR CLOSER ONLY AT THE DIRECTION OF THE PROJECT LANDSCAPE ARCHITECT.
 3. ALL DEBRIS, FILL, EQUIPMENT AND MATERIAL SHALL BE KEPT CLEAR OF AREA WITHIN PROTECTIVE FENCE. NO CLEANING, STORAGE, OR DISPOSAL OF ANY MATERIAL ALLOWED WITHIN THE DRIP LINE OF TREES TO BE SAVED.
 4. TREE PROTECTION FENCING SHALL BE INSTALLED WHERE DIRECTED BY LANDSCAPE ARCHITECT AND SHALL BE PAID ON A UNIT PRICE BASIS.



SESC NOTES

1. THIS PROJECT MUST BE CONSTRUCTED IN COMPLIANCE WITH PART 91 OF MICHIGAN NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION ACT 451 OF 1994, AS AMENDED, THE SOIL EROSION AND SEDIMENT CONTROL ACT.
2. PRIOR TO ANY SITE DISTURBANCE, INCLUDING DEMOLITION, CONTRACTOR SHALL PLACE EROSION CONTROL MEASURES ON ALL EXISTING STORM SEWER STRUCTURES AFFECTED BY WORK IN THIS CONTRACT. SUCH EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL PERMANENT MEASURES ARE IN PLACE.
3. CONTRACTOR SHALL PLACE TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES AS REQUIRED AND SHOWN ON PLANS.
4. CONTRACTOR SHALL PROVIDE AND MAINTAIN ALL EROSION CONTROL MEASURES AS REQUIRED BY STATE AND LOCAL GOVERNING AUTHORITIES.
5. DAILY INSPECTIONS SHALL BE MADE BY THE CONTRACTOR TO DETERMINE THE EFFECTIVENESS OF EROSION AND SEDIMENT CONTROL MEASURES. ANY NECESSARY REPAIRS SHALL BE MADE WITHOUT DELAY.
6. ALL EROSION AND SEDIMENT RESULTING FROM WORK ON SITE SHALL BE CONTAINED ON SITE AND NOT ALLOWED TO COLLECT IN ANY OFF-SITE AREAS OR WATERWAYS. WATERWAYS INCLUDE BOTH NATURAL AND MAN-MADE OPEN DITCHES, STREAMS, STORM DRAINS, RIVERS, OR PONDS.
7. CONTRACTOR SHALL PLACE INLET FILTER PROTECTION ON ALL STORM STRUCTURES AFFECTED BY THIS PROJECT.
8. ALL TEMPORARY SEDIMENT BASINS USED DURING CONSTRUCTION SHALL BE CLEANED AND ALL SEDIMENT LEGALLY DISPOSED OF PRIOR TO STABILIZATION. REMOVAL OF ALL FINES AND SEDIMENT IS CRITICAL IN AREAS WHERE INFILTRATION PRACTICES SHALL BECOME PERMANENT BEST MANAGEMENT PRACTICE.
9. CONTRACTOR SHALL CLEAN DEBRIS FROM STREETS ON A DAILY BASIS AS NEEDED. STREETS SHALL BE SWEEPED WEEKLY.

SESC DATA NOTES

PARCEL IDENTIFICATION: J-10-35-200-001
 LEGAL DESCRIPTION: SEE EXISTING CONDITIONS SHEET C100
 TOTAL PARCEL AREA: 12.04 ACRES
 TOTAL DISTURBED AREA: 6.45 ACRES
 PROXIMITY TO NEAREST WATER BODY/DRAIN: 205' TO DETENTION BASIN SOUTHWEST OF PROPERTY

PARCEL SOILS DESCRIPTION:
 BntaaB: BLOUNT LOAM; 2 TO 6 PERCENT SLOPES
 NaB: NAPPANEE SILTY CLAY LOAM; 2 TO 6 PERCENT SLOPES
 PvmmaaA: PEWAMO CLAY LOAM, DENSE SUBSTRATUM; 0 TO 1 PERCENT SLOPES

_____ - SOILS BOUNDARY
 SOILS ARE BASED ON USDA WEB SOIL SURVEY.

ESTIMATED SESC COST: \$10,000
 ESTIMATED STABILIZATION COST: \$10,000

APPROXIMATE START DATE: OCTOBER 2020
 APPROXIMATE COMPLETION DATE: DECEMBER 2021
 PERSON RESPONSIBLE FOR TEMPORARY AND PERMANENT SOIL EROSION CONTROL:
 MATHEW RATZOW, SENIOR PROJECT MANAGER
 O'NEAL CONSTRUCTION, INC.
 525 WEST WILLIAM
 ANN ARBOR, MI 48103
 PHONE 734.769.0770

MAINTENANCE SCHEDULES

MAINTENANCE SCHEDULE (DURING CONST. BY SITE CONTRACTOR)

TASK	COMPONENT	SCHEDULE
INSPECT FOR SEDIMENT ACCUMULATION	X	WEEKLY
REMOVAL OF SEDIMENT ACCUMULATION	X	AS NEEDED AND PRIOR TO TURNOVER
INSPECT FOR FLOATABLES AND DEBRIS	X	QUARTERLY
REMOVAL OF FLOATABLES AND DEBRIS	X	QUARTERLY AND AT TURNOVER
INSPECT FOR EROSION	X	WEEKLY
REPLACEMENT OF STONE	X	AS NEEDED*
CLEAN STREETS, DRIVES AND PARKING AREAS		0 TO 2 TIMES PER YEAR
INSPECT STRUCTURAL ELEMENTS DURING WET WEATHER AND COMPARE TO AS-BUILT PLANS (BY PROFESSIONAL ENGINEER)	X X	ANNUALLY AND PRIOR TO TURNOVER
MAKE ADJUSTMENTS OR REPLACEMENTS AS DETERMINED BY PRE-TURNOVER INSPECTION	X X	AS NEEDED

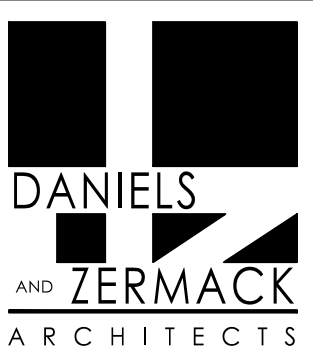
MAINTENANCE SCHEDULE (POST CONST. BY OWNER)

TASK	COMPONENT	SCHEDULE
INSPECT FOR SEDIMENT ACCUMULATION	X X	ANNUALLY
REMOVAL OF SEDIMENT ACCUMULATION	X X	ANNUALLY AS NEEDED
INSPECT FOR FLOATABLES AND DEBRIS	X X	ANNUALLY
REMOVAL OF FLOATABLES AND DEBRIS	X X	ANNUALLY AS NEEDED
REPLACEMENT OF STONE	X	EVERY 3-5 YEARS AS NEEDED
CLEAN STREETS, DRIVES AND PARKING AREAS		0 TO 2 TIMES PER YEAR
INSPECT STRUCTURAL ELEMENTS DURING WET WEATHER AND COMPARE TO AS-BUILT PLANS (BY PROFESSIONAL ENGINEER)	X X	ANNUALLY
MAKE ADJUSTMENTS OR REPLACEMENTS AS DETERMINED BY INSPECTION	X X	AS NEEDED

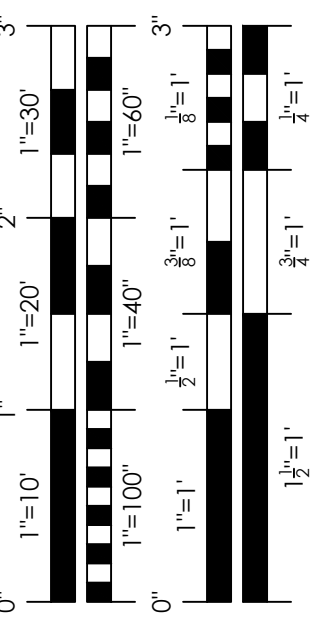
CONSTRUCTION SEQUENCE

CONSTRUCTION SEQUENCE	OPERATION TIME SCHEDULE (2020-2021)													
	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER
TEMPORARY CONTROL MEASURES	[Bar spanning Oct 2020 to Dec 2020]													
LAYOUT AND STACKING	[Bar spanning Oct 2020 to Dec 2020]													
BUILDING FOUNDATIONS	[Bar spanning Oct 2020 to Dec 2020]													
MASS GRADING	[Bar spanning Oct 2020 to Dec 2020]													
SITE UTILITIES	[Bar spanning Oct 2020 to Dec 2020]													
SITE PAVEMENTS	[Bar spanning Oct 2020 to Dec 2020]													
FINISH GRADING	[Bar spanning Oct 2020 to Dec 2020]													
SEEDING AND SITE RESTORATION	[Bar spanning Oct 2020 to Dec 2020]													





2080 S. State Street
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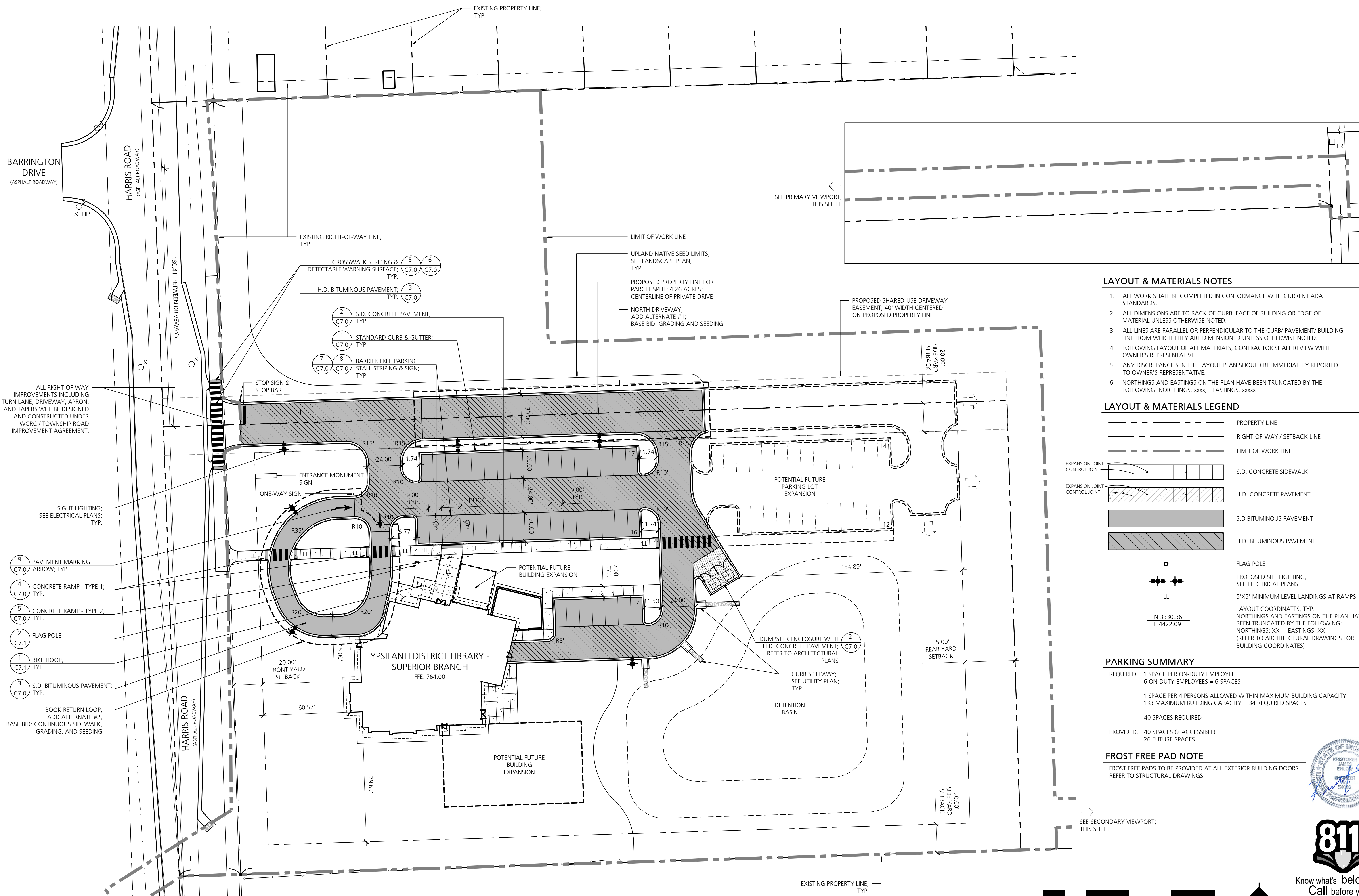
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DETAIL SYMBOL

DETAIL NUMBER	
REFERENCE SHEET	

C3.0
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LAYOUT & MATERIALS NOTES

- ALL WORK SHALL BE COMPLETED IN CONFORMANCE WITH CURRENT ADA STANDARDS.
- ALL DIMENSIONS ARE TO BACK OF CURB, FACE OF BUILDING OR EDGE OF MATERIAL UNLESS OTHERWISE NOTED.
- ALL LINES ARE PARALLEL OR PERPENDICULAR TO THE CURB/PAVEMENT/BUILDING LINE FROM WHICH THEY ARE DIMENSIONED UNLESS OTHERWISE NOTED.
- FOLLOWING LAYOUT OF ALL MATERIALS, CONTRACTOR SHALL REVIEW WITH OWNER'S REPRESENTATIVE.
- ANY DISCREPANCIES IN THE LAYOUT PLAN SHOULD BE IMMEDIATELY REPORTED TO OWNER'S REPRESENTATIVE.
- NORTHINGS AND EASTINGS ON THE PLAN HAVE BEEN TRUNCATED BY THE FOLLOWING: NORTHINGS: xxxxx; EASTINGS: xxxxx

LAYOUT & MATERIALS LEGEND

	PROPERTY LINE
	RIGHT-OF-WAY / SETBACK LINE
	LIMIT OF WORK LINE
	S.D. CONCRETE SIDEWALK
	H.D. CONCRETE PAVEMENT
	S.D. BITUMINOUS PAVEMENT
	H.D. BITUMINOUS PAVEMENT
	FLAG POLE
	PROPOSED SITE LIGHTING; SEE ELECTRICAL PLANS
	5'x5' MINIMUM LEVEL LANDINGS AT RAMPS

PARKING SUMMARY

REQUIRED: 1 SPACE PER ON-DUTY EMPLOYEE
6 ON-DUTY EMPLOYEES = 6 SPACES

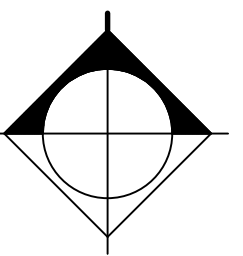
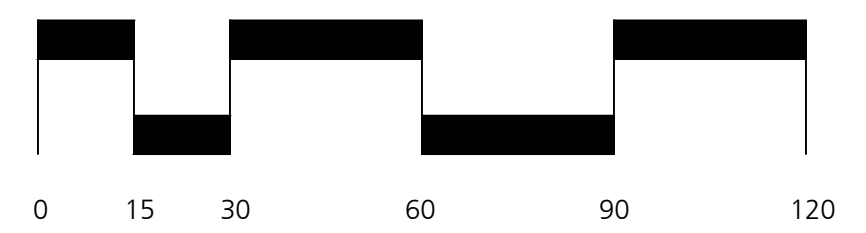
1 SPACE PER 4 PERSONS ALLOWED WITHIN MAXIMUM BUILDING CAPACITY
133 MAXIMUM BUILDING CAPACITY = 34 REQUIRED SPACES

40 SPACES REQUIRED

PROVIDED: 40 SPACES (2 ACCESSIBLE)
26 FUTURE SPACES

FROST FREE PAD NOTE

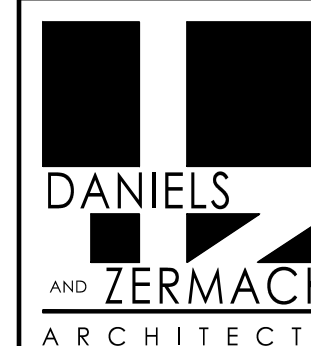
FROST FREE PADS TO BE PROVIDED AT ALL EXTERIOR BUILDING DOORS. REFER TO STRUCTURAL DRAWINGS.



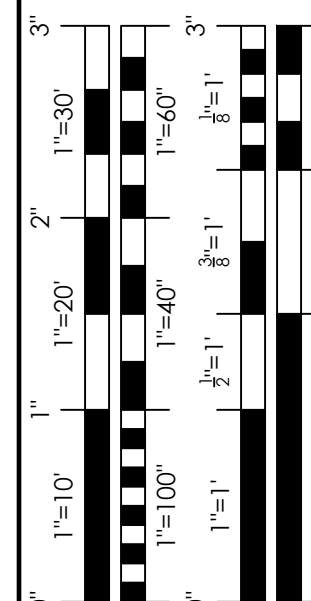
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LAYOUT & MATERIALS PLAN



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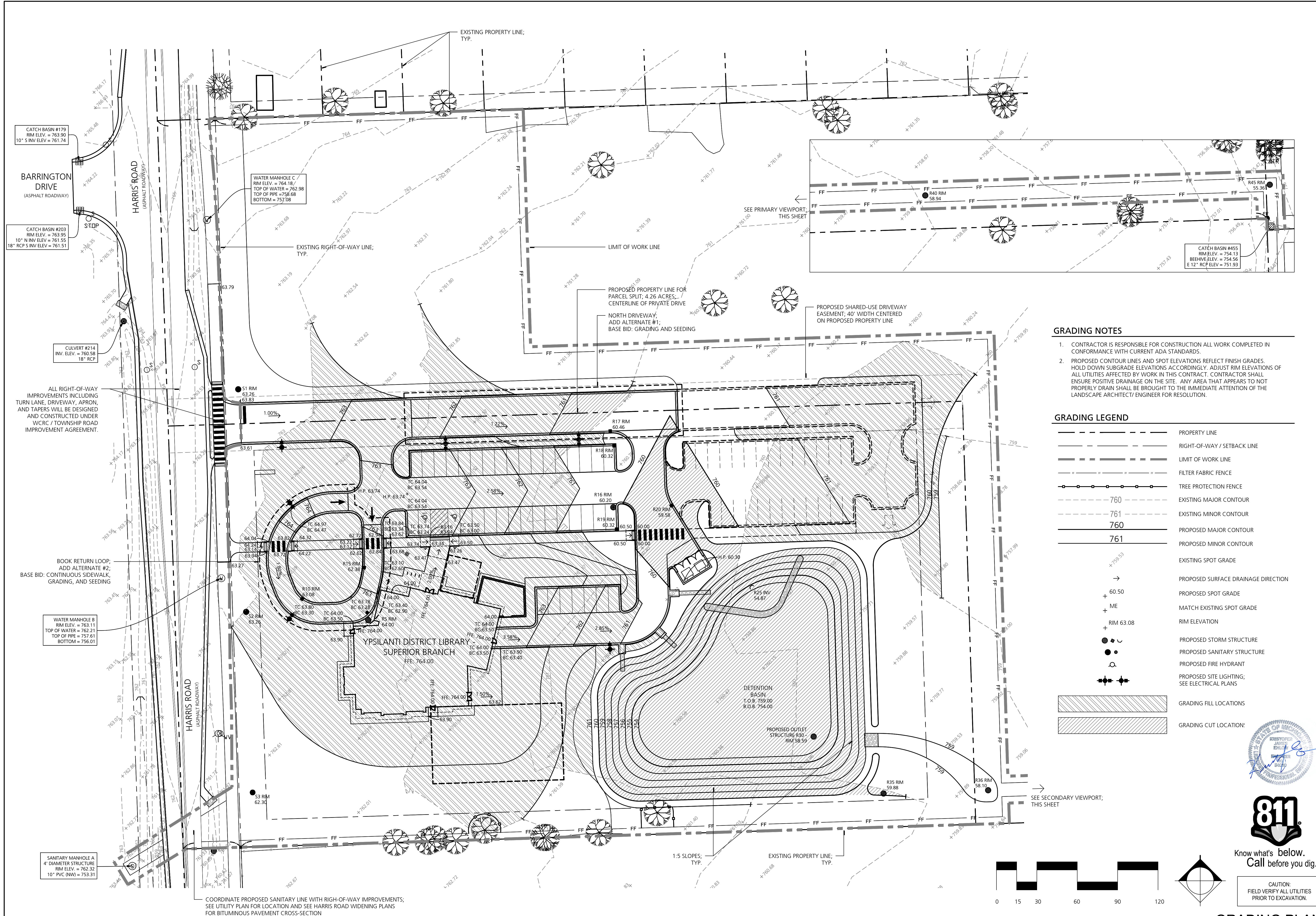
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C4.0
YDL SUPERIOR



GRADING NOTES

- CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTION ALL WORK COMPLETED IN CONFORMANCE WITH CURRENT ADA STANDARDS.
- PROPOSED CONTOUR LINES AND SPOT ELEVATIONS REFLECT FINISH GRADES. HOLD DOWN SUBGRADE ELEVATIONS ACCORDINGLY. ADJUST RIM ELEVATIONS OF ALL UTILITIES AFFECTED BY WORK IN THIS CONTRACT. CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE ON THE SITE. ANY AREA THAT APPEARS TO NOT PROPERLY DRAIN SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE LANDSCAPE ARCHITECT/ENGINEER FOR RESOLUTION.

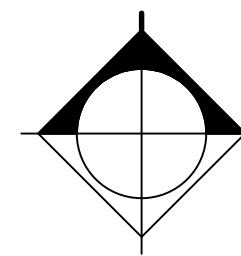
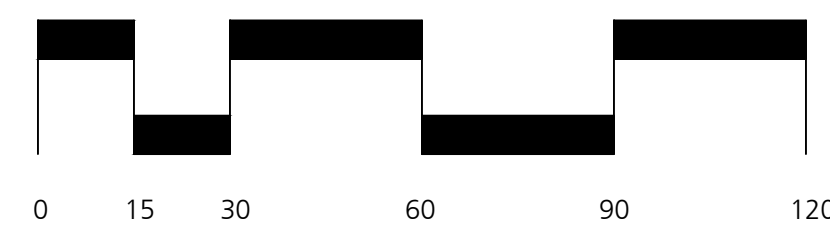
GRADING LEGEND

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	RIGHT-OF-WAY / SETBACK LINE
	LIMIT OF WORK LINE
	FILTER FABRIC FENCE
	TREE PROTECTION FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	PROPOSED MAJOR CONTOUR
	PROPOSED MINOR CONTOUR
	EXISTING SPOT GRADE
	PROPOSED SURFACE DRAINAGE DIRECTION
	PROPOSED SPOT GRADE
	MATCH EXISTING SPOT GRADE
	RIM ELEVATION
	PROPOSED STORM STRUCTURE
	PROPOSED SANITARY STRUCTURE
	PROPOSED FIRE HYDRANT
	PROPOSED SITE LIGHTING; SEE ELECTRICAL PLANS
	GRADING FILL LOCATIONS
	GRADING CUT LOCATION

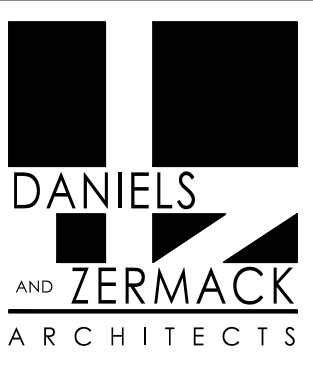


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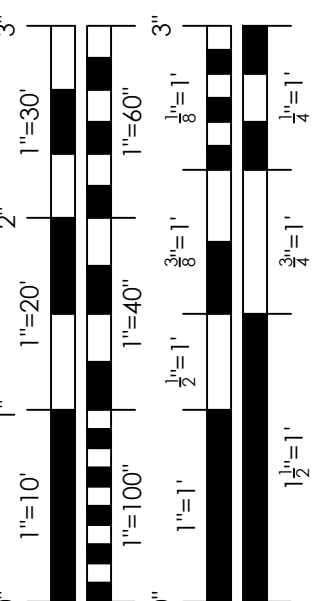
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GRADING PLAN



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DETAIL SYMBOL	DETAIL NUMBER REFERENCE SHEET
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C4.1
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DETENTION BASIN REQUIREMENTS

REQUIRED: 90,446 CUBIC FEET
FOREBAY VOLUME = 4,522 CUBIC FEET

PROVIDED: 101,282 CUBIC FEET
FOREBAY VOLUME = 4,522 CUBIC FEET

SIDE SLOPES: 1:5

Total Volume Provided:

Elevation	Area	Depth	Volume
759.00	27,908	1.00	26,262
758.00	24,615	1.00	23,067
757.00	21,518	1.00	20,066
756.00	18,613	1.00	17,255
755.00	15,897	1.00	14,634
754.00	13,370	0.00	0
Total:			101,282

Forebay:

Elevation	Area	Depth	Volume
758.00	1,852	1.00	1,652
757.00	1,452	1.00	1,275
756.00	1,098	1.00	943
755.00	787	1.00	653
754.00	518	0.00	0
Total:			4,522

OUTLET CONTROL STRUCTURE CALCULATIONS

PROJECT DATA		FIRST FLUSH DISCHARGE	
Area	5.92 ac	Off	0.155 cfs
First Flush Volume	13,399 cft	Head Factor	0.67
Bankfull Volume	25,637 cft	havg	0.61 ft
On-Site Infiltration	0 cft	Aff	0.0399 ft
100-Year Volume, plus 20%	90,446 cft	Orif	1.50 inch
100-Year Volume, less infiltration	90,446 cft	Aorif	0.0123 sf
		MaxOrif	3.25
Bottom of Detention	754.00 Xbot	Orifact	0.143 cfs
		Tffact	26.02 hr
First Flush Detained	13,399 cft		
First Flush Elevation	754.92 cff	3	1.50 inch holes
			> 24 hr
Bankfull Detained	25,637 cft		
Bankfull Elevation	755.64 Xbf		
100-Year Elevation	758.59 X100		
Qallow	0.888 cfs		
BANKFULL DISCHARGE		100 YEAR (1%) STORM	
havg	1.09 ft	Qallow	0.888 cfs
Qbf	0.191 cfs	Off+Qbf	0.568 cfs
Tbf	37.2 hr	Q100max	0.320 cfs
Vrem	12,238 cft	A100max	0.0375 sf
Target	38 hr	Orif	2.50 inch
Trem	12.0 hr	Aorif	0.0341 sft
hffavg	1.40 ft	MaxOrif	1.10
Off+bf	0.216 cfs	Qtotal	0.859 cfs
Vff+bf	9,333 cft		< 0.888 cfs
Vbf	2,906 cft		
Qbf	0.067 cfs	1	2.50 inch holes
hbfavg	0.48 ft	hallavg	3.60 ft
Abf	0.0195 sft	Qall	0.348 cfs
Orif	0.75 inch	hbfavg	2.69 ft
Aorif	0.0031 sft	Qbf+100	0.955 cfs
MaxOrif	6.36	h100avg	1.97 ft
Qactbf	0.064 cfs	Q100avg	0.238 cfs
Tactbf	38.2 hr	Vrem	64,809 cft
		T100	49.9 hr
6	0.75 inch holes		< 72 hr

MAINTENANCE SCHEDULE
(POST CONST. BY OWNER)

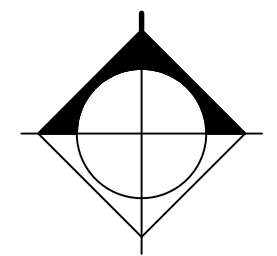
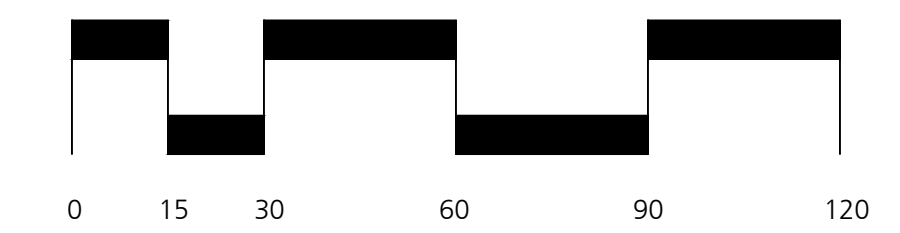
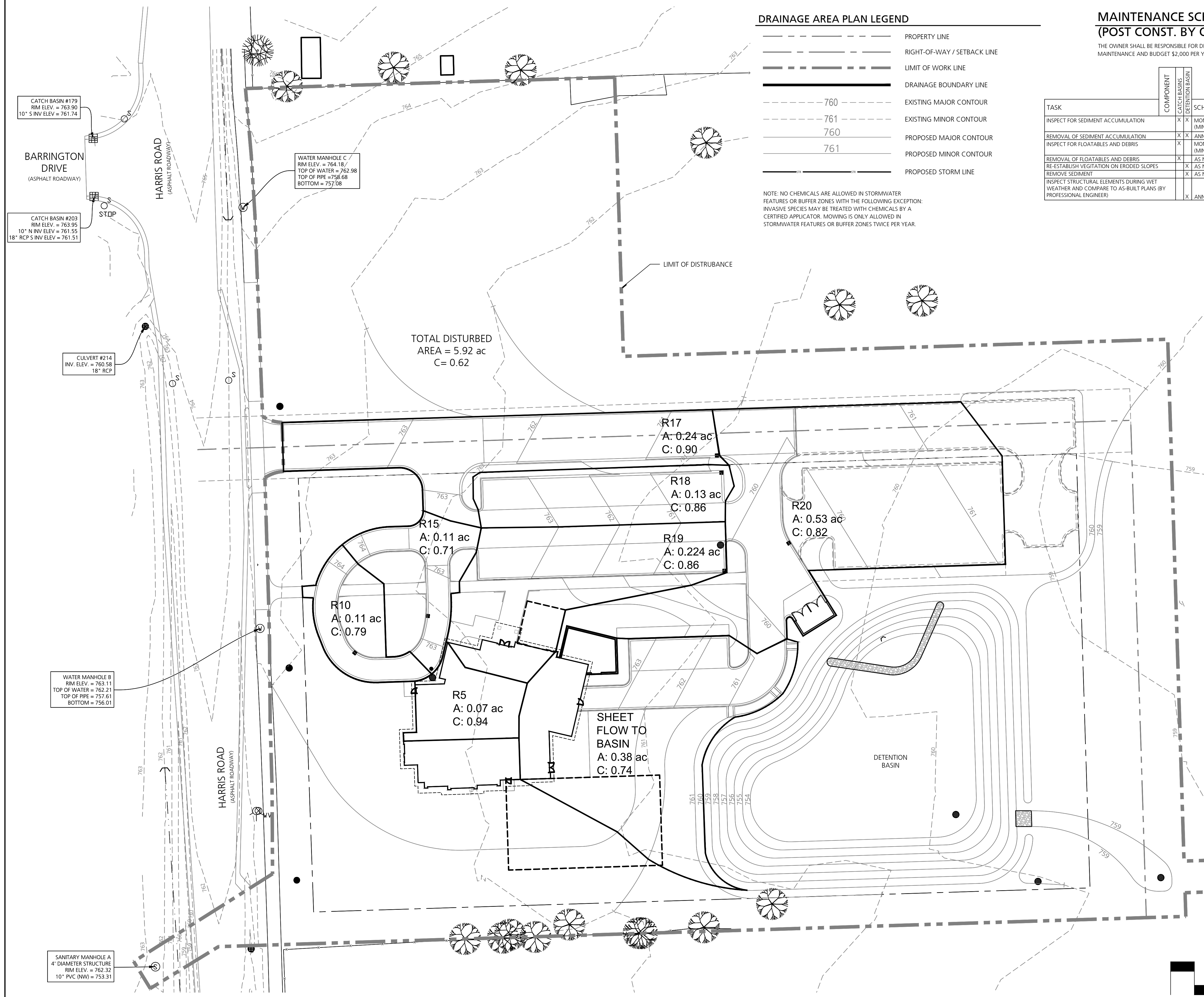
THE OWNER SHALL BE RESPONSIBLE FOR DETENTION BASIN MAINTENANCE AND BUDGET \$2,000 PER YEAR TO DO SO.

TASK	COMPONENT	SCHEDULE
INSPECT FOR SEDIMENT ACCUMULATION	CATCH BASIN	MONTHLY OR AS NEEDED (MINIMUM ANNUALLY)
REMOVAL OF SEDIMENT ACCUMULATION	DETENTION BASIN	ANNUALLY AS NEEDED
INSPECT FOR FLOATABLES AND DEBRIS		MONTHLY OR AS NEEDED (MINIMUM ANNUALLY)
REMOVAL OF FLOATABLES AND DEBRIS		AS NEEDED (MINIMUM ANNUALLY)
RE-ESTABLISH VEGETATION ON ERODED SLOPES		AS NEEDED
REMOVE SEDIMENT		AS NEEDED
INSPECT STRUCTURAL ELEMENTS DURING WET WEATHER AND COMPARE TO AS-BUILT PLANS (BY PROFESSIONAL ENGINEER)		ANNUALLY

DRAINAGE AREA PLAN LEGEND

---	PROPERTY LINE
- - - -	RIGHT-OF-WAY / SETBACK LINE
---	LIMIT OF WORK LINE
---	DRAINAGE BOUNDARY LINE
- - - -	EXISTING MAJOR CONTOUR
- - - -	EXISTING MINOR CONTOUR
---	PROPOSED MAJOR CONTOUR
---	PROPOSED MINOR CONTOUR
---	PROPOSED STORM LINE

NOTE: NO CHEMICALS ARE ALLOWED IN STORMWATER FEATURES OR BUFFER ZONES WITH THE FOLLOWING EXCEPTION: INVASIVE SPECIES MAY BE TREATED WITH CHEMICALS BY A CERTIFIED APPLICATOR. MOWING IS ONLY ALLOWED IN STORMWATER FEATURES OR BUFFER ZONES TWICE PER YEAR.



Know what's below.
Call before you dig.

CAUTION:
FIELD VERIFY ALL UTILITIES
PRIOR TO EXCAVATION.

DRAINAGE AREA PLAN

DETENTION BASIN CALCULATIONS

WASHTENAW COUNTY Updated 10/6/2014 Project Name: YDL KAV Date: 9/22/2020. Determining Post-Development Cover Types, Areas, Curve Numbers and Runoff Coefficients. Rational Method Variables, NRCS Variables, Impervious Cover.

WASHTENAW COUNTY Updated 10/6/2014 Project Name: YDL KAV Date: 9/22/2020. Standard Method Runoff Volume Calculations. First Flush Runoff Calculations (Vff).

WASHTENAW COUNTY Updated 10/6/2014 Project Name: YDL KAV Date: 9/22/2020. Standard Method Runoff Volume Calculations. Pre-development Bankfull Runoff Calculations (Vof-pre).

WASHTENAW COUNTY Updated 10/6/2014 Project Name: YDL KAV Date: 9/22/2020. Standard Method Runoff Volume Calculations. Pervious Cover Post-Development Bankfull Runoff Calculations (Vof-post).

WASHTENAW COUNTY Updated 10/6/2014 Project Name: YDL KAV Date: 9/22/2020. Standard Method Runoff Volume Calculations. Impervious Cover Post-Development Bankfull Runoff Calculations (Vof-imp-post).

WASHTENAW COUNTY Updated 10/6/2014 Project Name: YDL KAV Date: 9/22/2020. Standard Method Runoff Volume Calculations. Pervious Cover Post-Development 100-year Storm Runoff Calculations (V100-per-post).

WASHTENAW COUNTY Updated 10/6/2014 Project Name: YDL KAV Date: 9/22/2020. Standard Method Runoff Volume Calculations. Impervious Cover Post-Development 100-year Storm Runoff Calculations (V100-imp-post).

WASHTENAW COUNTY Updated 10/6/2014 Project Name: YDL KAV Date: 9/22/2020. Standard Method Runoff Volume Calculations. Determine Time of Concentration for Applicable Flow Types (Tc-tr).

WASHTENAW COUNTY Updated 10/6/2014 Project Name: YDL KAV Date: 9/22/2020. Standard Method Runoff Volume Calculations. Total Time of Concentration (Tc-tr).

WASHTENAW COUNTY Updated 10/6/2014 Project Name: YDL KAV Date: 9/22/2020. Standard Method Runoff Volume Calculations. Runoff Summary & Onsite Infiltration Requirement.

WASHTENAW COUNTY Updated 10/6/2014 Project Name: YDL KAV Date: 9/22/2020. Standard Method Runoff Volume Calculations. Determine Onsite Infiltration Requirement.

WASHTENAW COUNTY Updated 10/6/2014 Project Name: YDL KAV Date: 9/22/2020. Standard Method Runoff Volume Calculations. Determine Applicable BMPs and Associated Volume Credits.

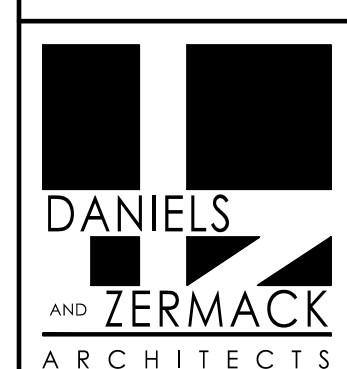
WASHTENAW COUNTY Updated 10/6/2014 Project Name: YDL KAV Date: 9/22/2020. Standard Method Runoff Volume Calculations. Site Summary of Infiltration & Detention.

WASHTENAW COUNTY Updated 10/6/2014 Project Name: YDL KAV Date: 9/22/2020. Standard Method Runoff Volume Calculations. Stormwater Management Summary.

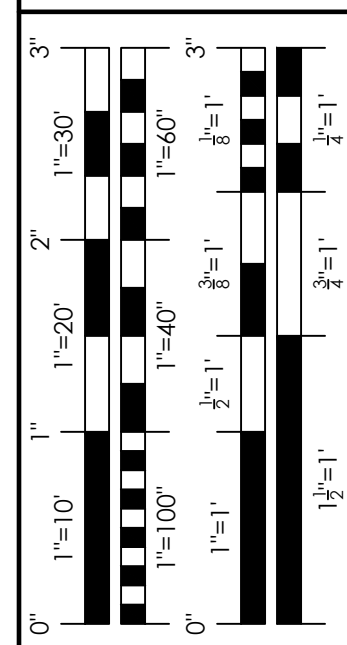
WASHTENAW COUNTY Updated 10/6/2014 Project Name: YDL KAV Date: 9/22/2020. Standard Method Runoff Volume Calculations. Stormwater Narrative.



YPSILANTI DISTRICT LIBRARY SUPERIOR TOWNSHIP BRANCH



2080 S. State Street Ann Arbor, MI 48104 O 734.761.2090 F 734.761.6607

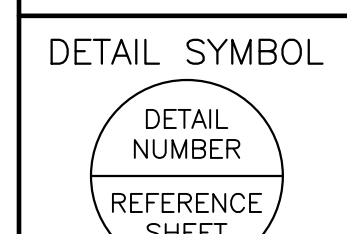


REVISIONS

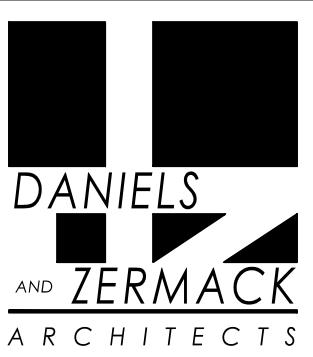
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Table with 2 columns: Job Number, Date. Includes entries for Job 2017-55, Date 25 SEPT 2020.

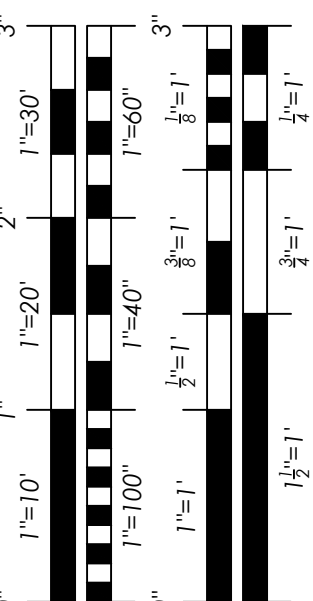
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C4.2 YDL SUPERIOR



2080 S. State Street
Ann Arbor, MI 48104
O 734.761.2090
F 734.761.6607



REVISIONS

PRELIM. SITE PLAN APPROVAL	21 FEB 2020
SESC & SITE CLEARING	11 SEPT 2020
FINAL SITE PLAN APPROVAL	25 SEPT 2020
FINAL SITE PLAN APPROVAL & W/CRC REVIEW	03 NOV 2020
FINAL SITE PLAN APPROVAL & W/CRC REVIEW	25 NOV 2020

JOB 2017-55

DATE 25 SEPT 2020

DRAWN BB

CHECKED BB

DETAIL SYMBOL

DETAIL NUMBER

REFERENCE SHEET

C5.0
YDL SUPERIOR

FRANCHISE UTILITY NOTES
FRANCHISE UTILITIES (IT, ELECTRIC, GAS) WILL BE COORDINATED PRIOR TO FINAL SITE PLAN SUBMISSION.

UTILITIES LEGEND

	PROPERTY LINE
	RIGHT-OF-WAY / SETBACK LINE
	LIMIT OF WORK LINE
	PROPOSED STORM UNDERDRAIN
	PROPOSED STORM LINE
	PROPOSED SANITARY LINE
	PROPOSED WATER LINE
	PROPOSED STORM STRUCTURE
	PROPOSED SANITARY STRUCTURE
	PROPOSED WATER STRUCTURE
	PROPOSED SITE LIGHTING; SEE ELECTRICAL PLANS

- UTILITIES NOTES**
- PROPOSED CONTOUR LINES AND SPOT ELEVATIONS REFLECT FINISH GRADES. HOLD DOWN SUBGRADE ELEVATIONS ACCORDINGLY. ADJUST RIM ELEVATIONS OF ALL UTILITIES AFFECTED BY WORK IN THIS CONTRACT. CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE ON THE SITE. ANY AREA THAT APPEARS TO NOT PROPERLY DRAIN SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE LANDSCAPE ARCHITECT/ENGINEER FOR RESOLUTION.
 - CONTRACTOR SHALL VERIFY ALL EXISTING UTILITY LOCATIONS, DEPTHS AND ELEVATIONS PRIOR TO CONSTRUCTION. NO CHANGES IN CONTRACT PRICE WILL BE AWARDED FOR ACTUAL DISCREPANCIES IN UTILITY LOCATIONS DUE TO THE FAILURE TO VERIFY ACTUAL FIELD LOCATIONS.
 - THE CONTRACTOR SHALL RESTORE ALL AREAS DISTURBED BY HIS CONSTRUCTION OPERATIONS TO A CONDITION EQUAL TO OR BETTER THAN THAT EXISTING PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CLEAN UP AND HAUL AWAY ALL CONSTRUCTION DEBRIS AND LITTER CAUSED BY HIS OPERATIONS.
 - CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION. ANY DAMAGE INCURRED SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
 - ALL UTILITY CROSSINGS SHALL HAVE A MINIMUM OF 18" VERTICAL CLEARANCE.
 - SEE ARCHITECTURAL AND MECHANICAL PLANS FOR CONTINUATION OF UTILITIES WITHIN STRUCTURES.

STORM STRUCTURE SCHEDULE

STRUCTURE ID	TYPE	RIM ELEV	INVERT ELEVATIONS
EX CB 455	48" CB	754.13	INV 12" N 752.03 INV 12" E 751.93
R5	24" CB	764.00	INV 4" NE 759.94 INV 12" W 759.90
R10	48" CB	763.08	INV 12" E 759.67 INV 12" NE 759.57 INV 4" SE 759.57 INV 4" NW 761.58
R15	48" CB	762.38	INV 12" SW 759.31 INV 12" E 756.98 INV 4" N 760.88 INV 4" S 760.88
R16	60" MH	760.20	INV 12" W 756.02 INV 12" S 756.74 INV 12" N 756.58 INV 12" E 755.92
R17	48" CB	760.46	INV 12" S 756.96 INV 4" W 758.96
R18	48" CB	760.32	INV 12" N 756.90 INV 12" S 756.80 INV 4" W 758.82
R19	48" CB	760.32	INV 12" N 756.82 INV 4" W 758.82
R20	48" CB	759.58	INV 12" W 755.71 INV 4" NW 758.08 INV 15" SE 755.46 INV 4" S 758.08
R25	15" FES	756.39	INV 15" NW 754.87
R30	48" OCS	758.59	INV 12" SE 754.80
R35	48" MH	759.88	INV 12" NW 754.49 INV 12" E 754.39
R40	48" MH	758.94	INV 12" W 753.52 INV 12" E 753.42
R45	48" MH	755.36	INV 12" W 752.27 INV 12" S 752.17

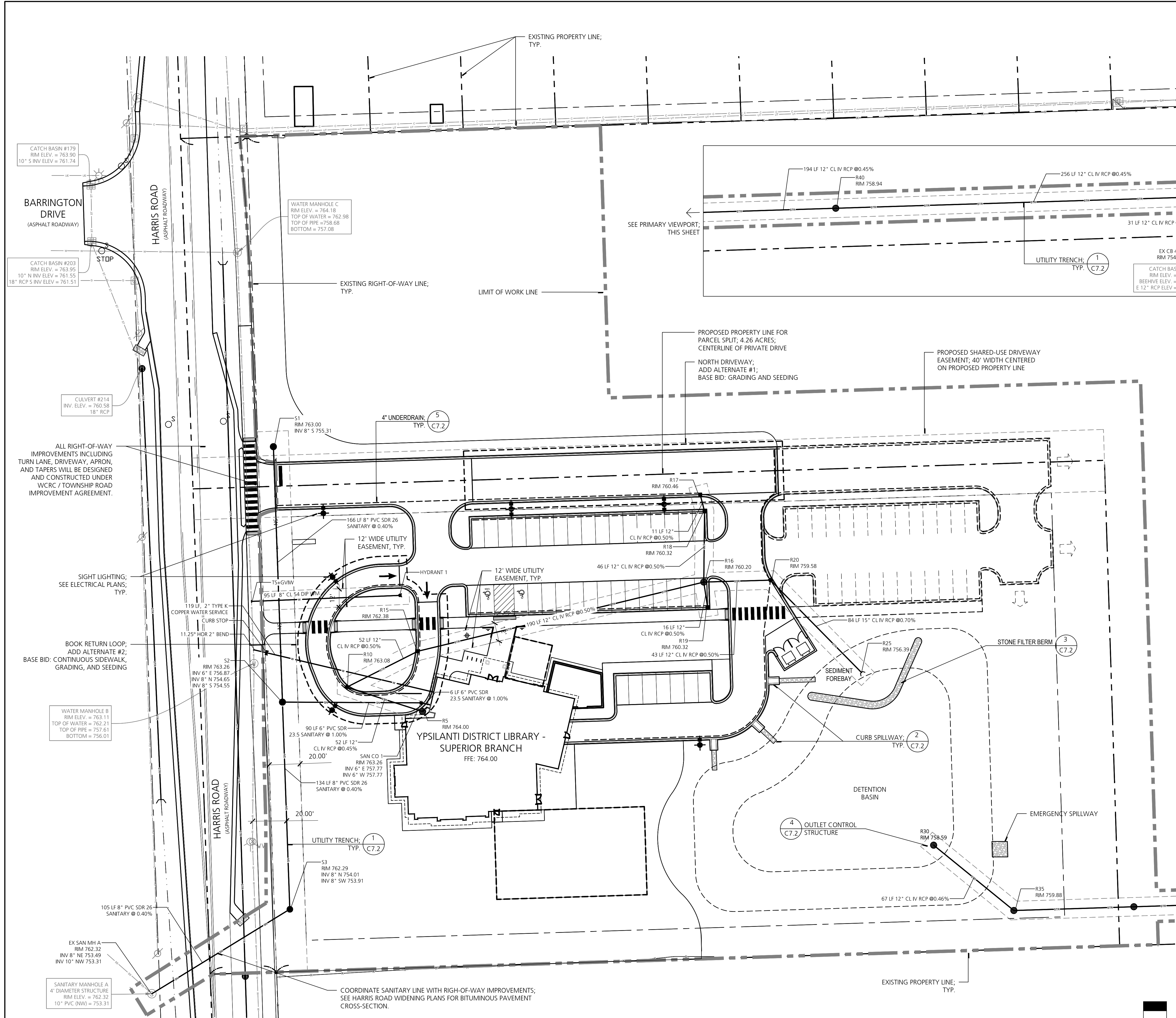
SANITARY STRUCTURE SCHEDULE

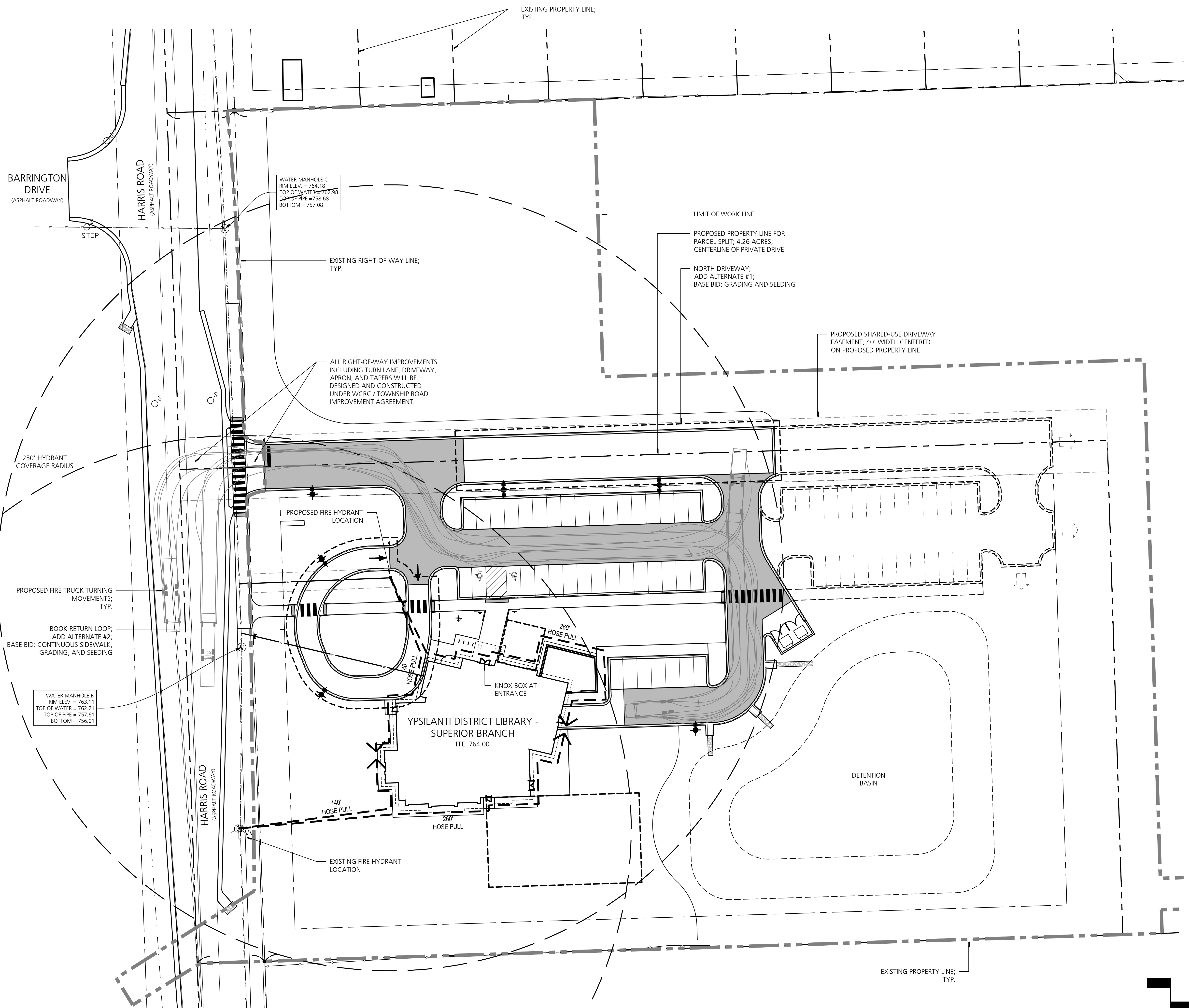
STRUCTURE ID	TYPE	RIM ELEV	INVERT ELEVATIONS
EX SAN MH A	48" MH	762.32	INV 8" NE 753.49 INV 10" NW 753.31
S1	48" MH	763.00	INV 8" S 755.31
S2	48" MH	763.26	INV 6" E 756.87 INV 8" N 754.65 INV 8" S 754.55
S3	48" MH	762.29	INV 8" N 754.01 INV 8" SW 753.91
SAN CO 1	6" CO	763.26	INV 6" E 757.77 INV 6" W 757.77



CAUTION: FIELD VERIFY ALL UTILITIES PRIOR TO EXCAVATION.

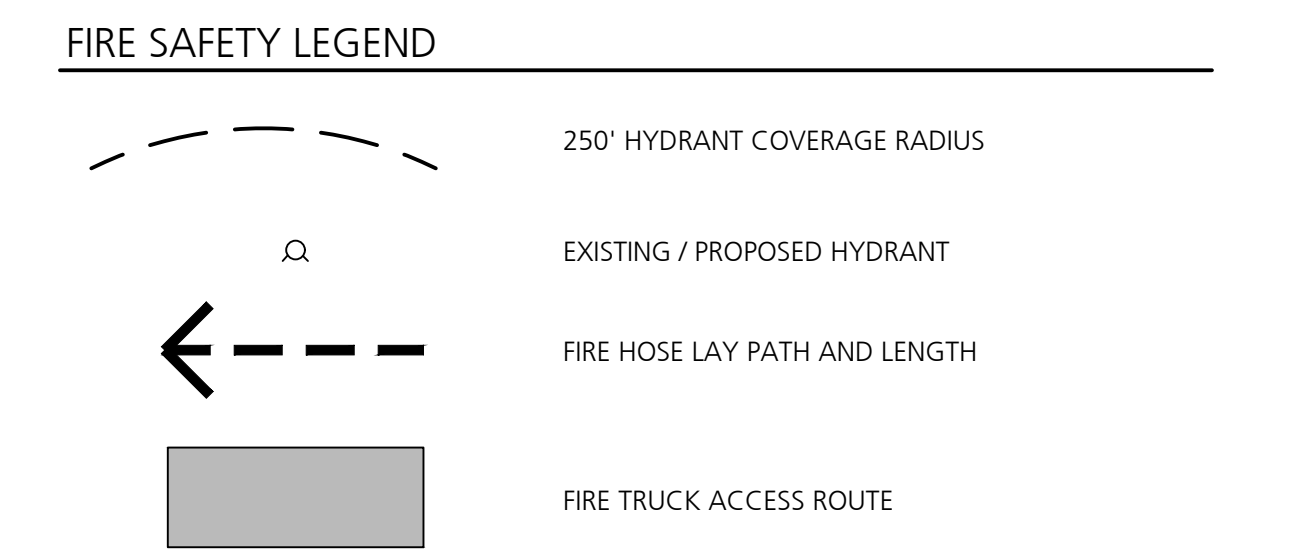
UTILITY PLAN



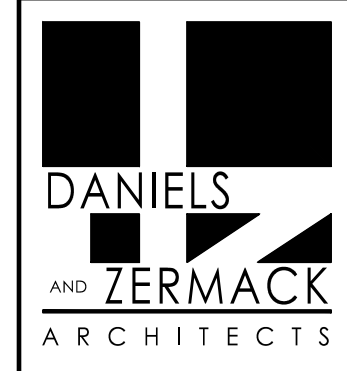


- FIRE SAFETY NOTES**
1. ENTIRE BUILDING FOOTPRINT IS WITHIN 250' RADIUS OF A HYDRANT.
 2. BUILDING ADDITION WILL BE CONSTRUCTION TYPE IIB.
 3. PROPOSED HYDRANT IS LOCATED SUCH THAT THE HOSE LAY TO ANY EXTERNAL PORTION OF A STRUCTURE WILL NOT EXCEED 400 FEET.
 4. ALL BUILDING FACADES ARE WITHIN 150' OF A FIRE TRUCK ACCESS ROUTE.

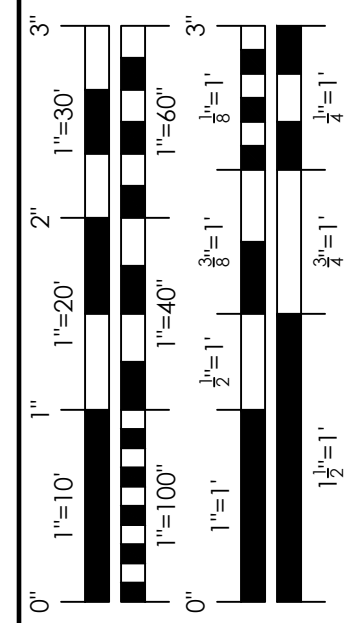
- CONSTRUCTION SEQUENCE NOTES**
1. HYDRANTS PROVIDING PROTECTION COVERAGE FOR THE BUILDING SHALL BE IN SERVICE AND APPROVED BY BOTH CITY ENGINEERING AND FIRE DEPARTMENT PRIOR TO PERMIT ISSUANCE FOR NEW CONSTRUCTION AND PRIOR TO COMBUSTIBLE MATERIALS BEING PLACED ON SITE.
 2. STORAGE AREA FOR CONSTRUCTION MATERIALS SHALL NOT INTERFERE WITH FIRE / EMERGENCY SITE ACCESS.



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SUPERIOR TOWNSHIP BRANCH

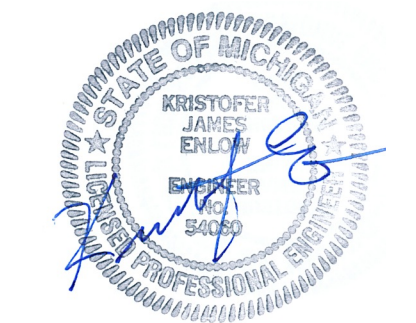


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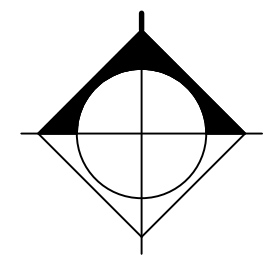
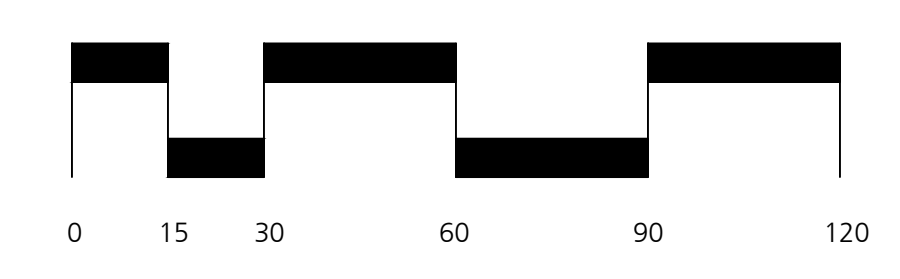


REVISIONS

PRELIM. SITE PLAN APPROVAL	21 FEB 2020
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CAUTION:
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PRIOR TO EXCAVATION.

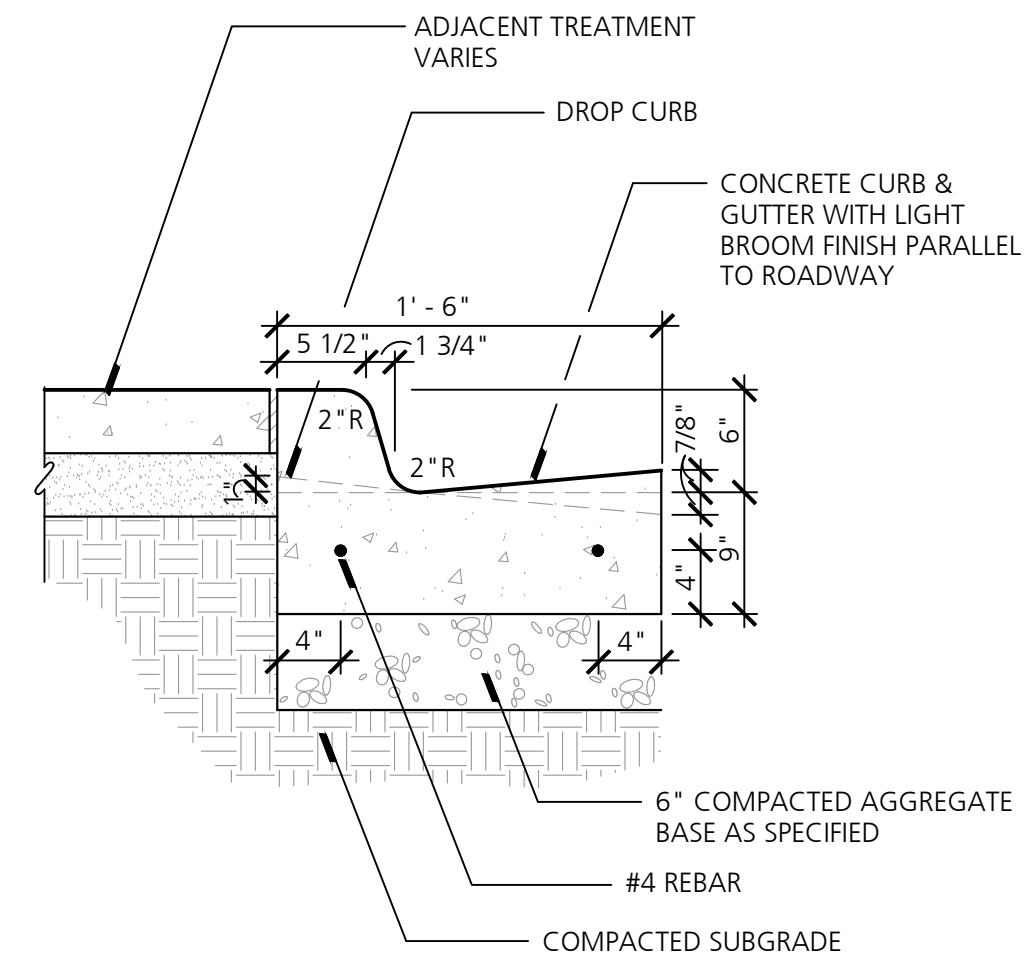


FIRE SAFETY PLAN

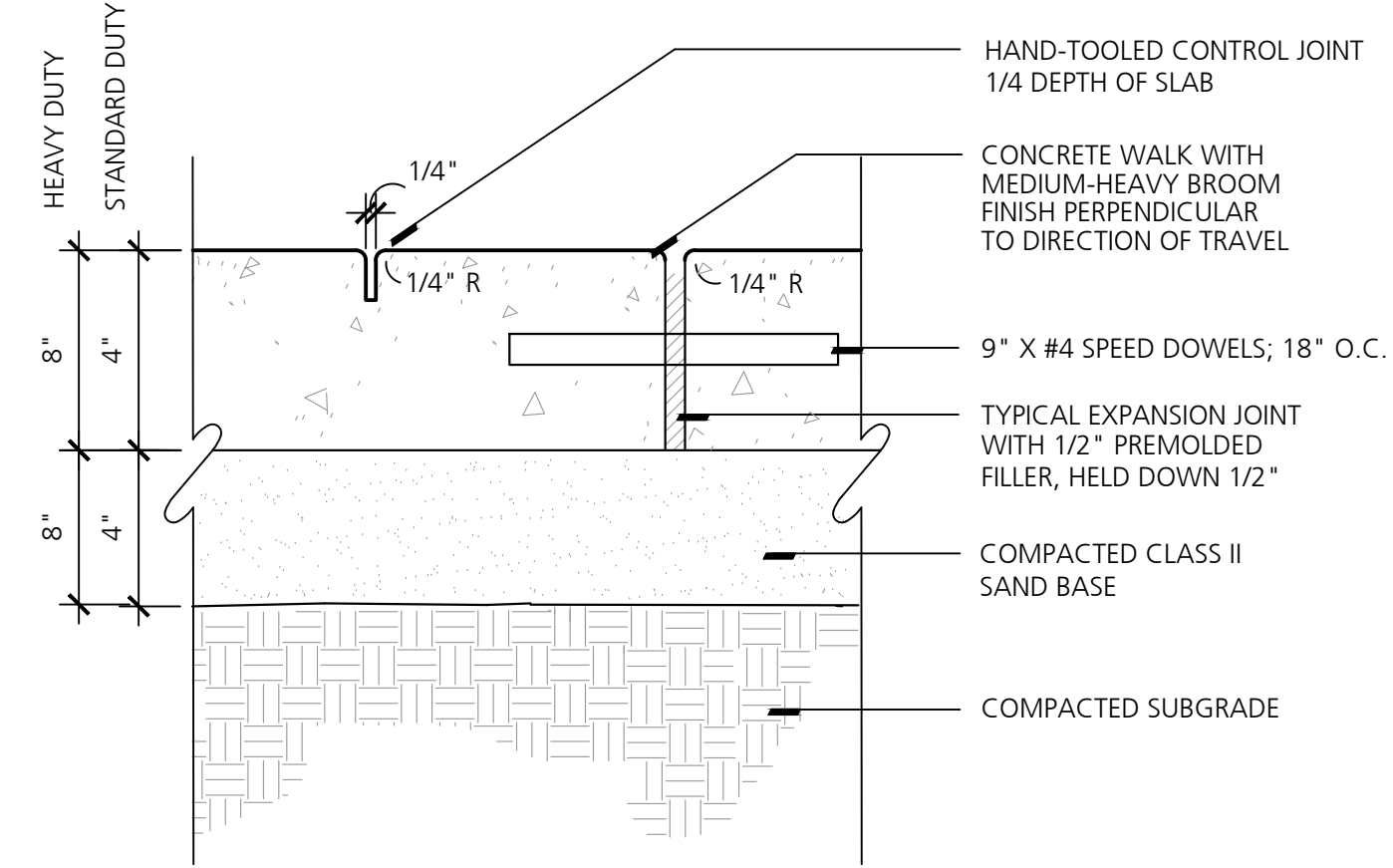
JOB 2017-55
DATE 25 SEPT 2020
DRAWN BB
CHECKED BB

DETAIL SYMBOL
DETAIL NUMBER
REFERENCE SHEET

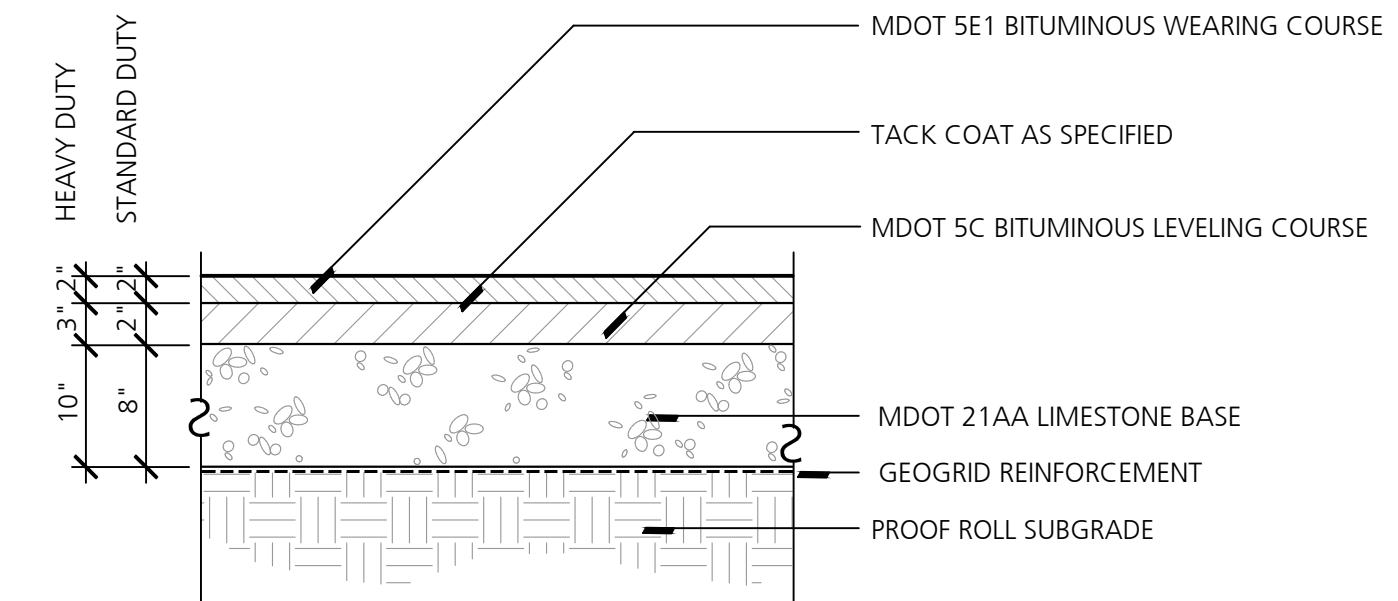
C6.0
YDL SUPERIOR



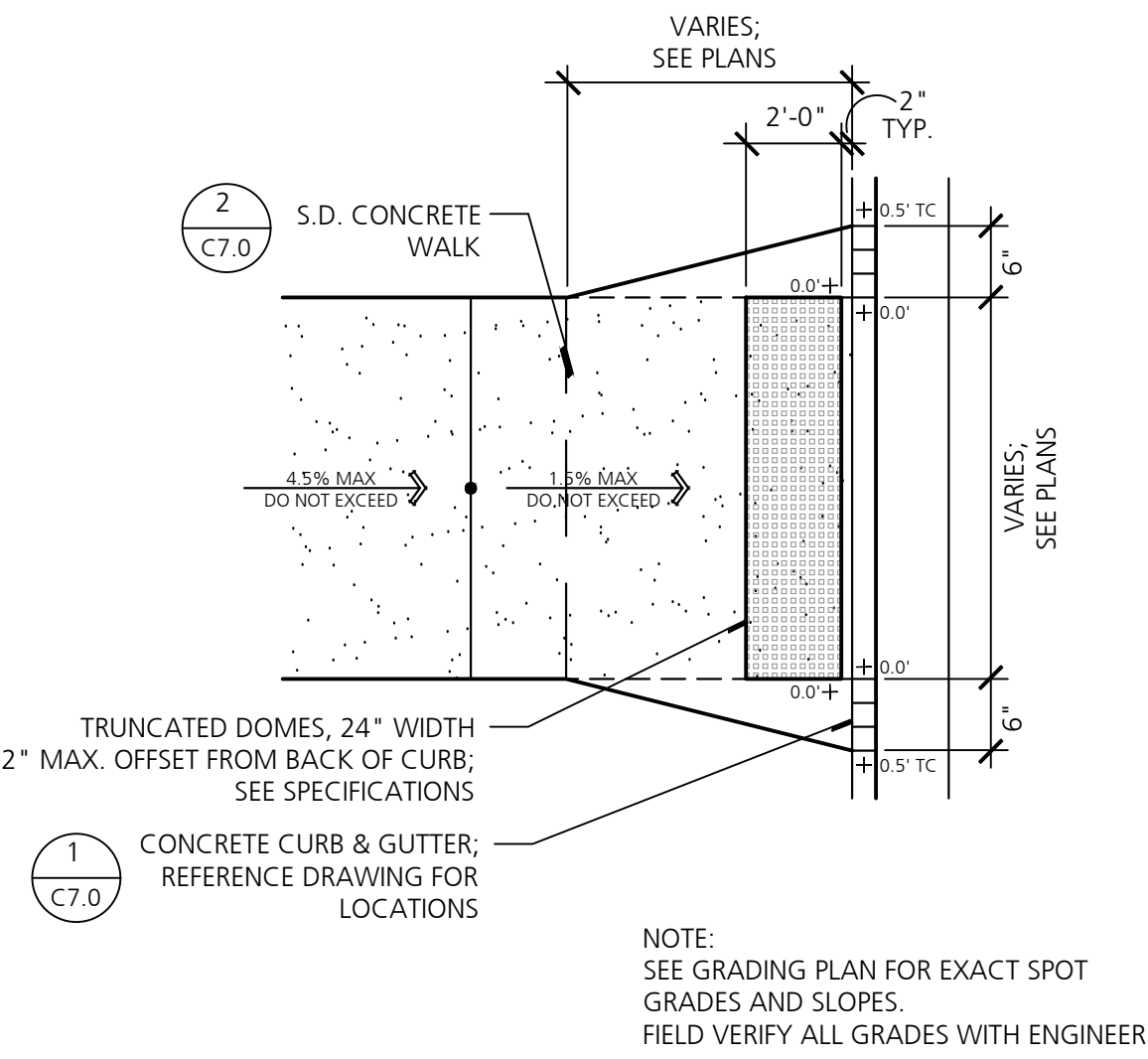
1 Standard Curb & Gutter / MDOT F2
NO SCALE



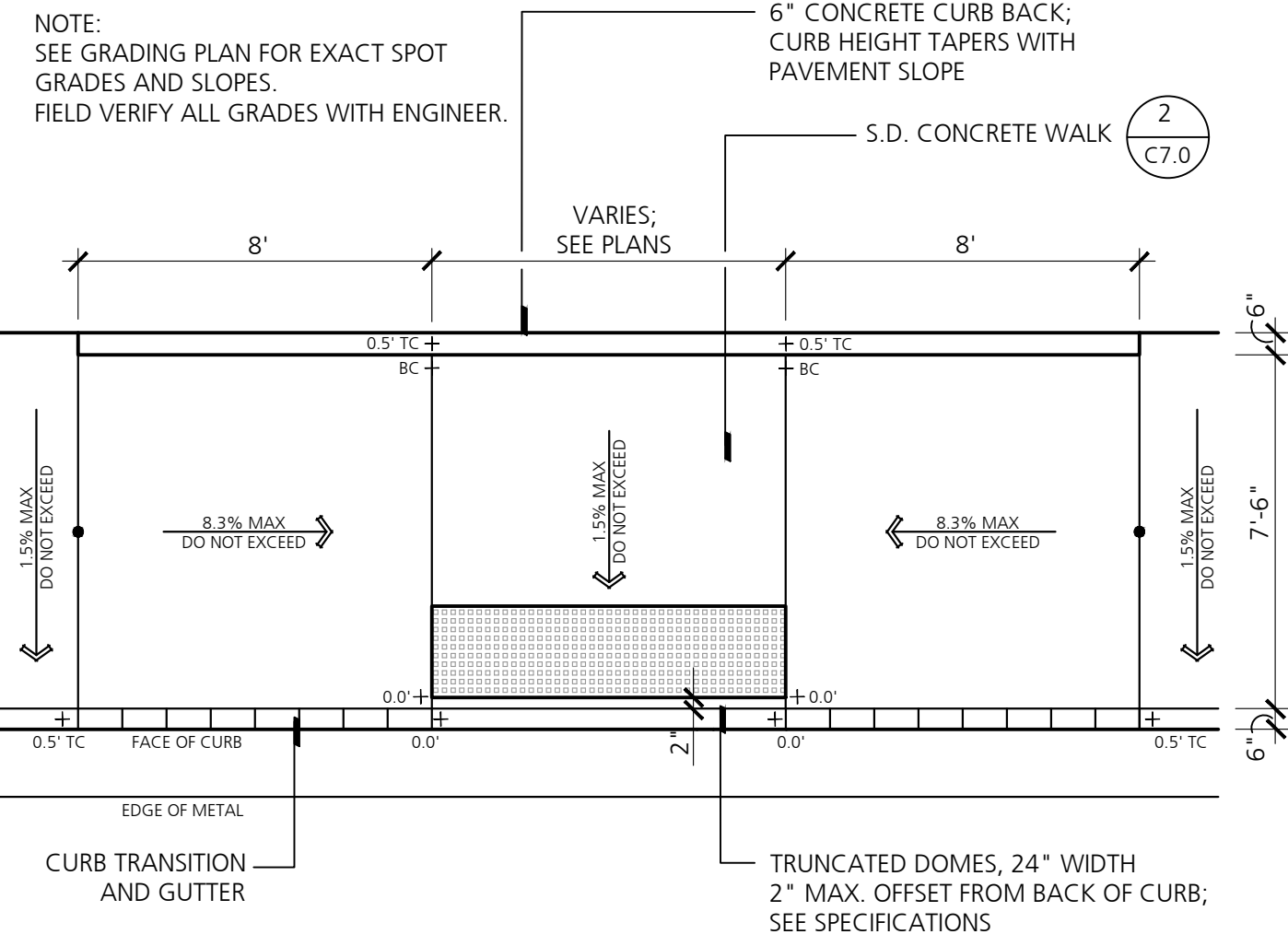
2 Concrete Pavement
NO SCALE



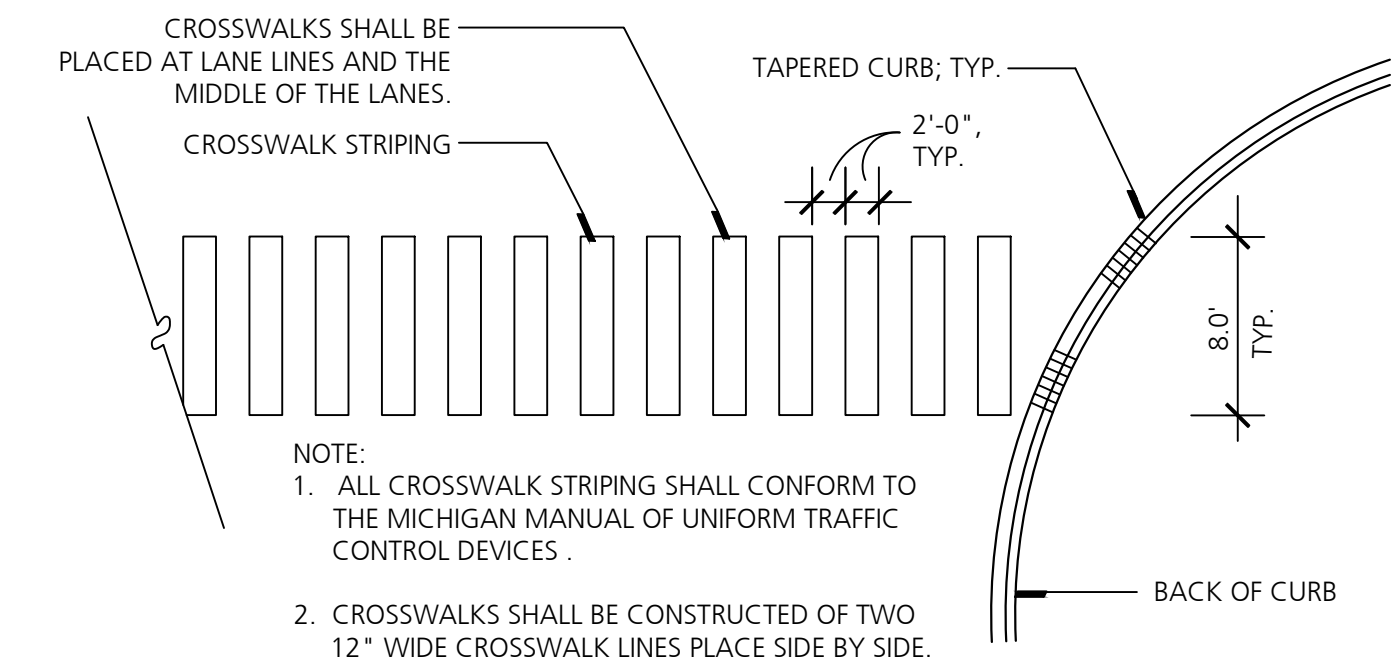
3 Bituminous Pavement
NO SCALE



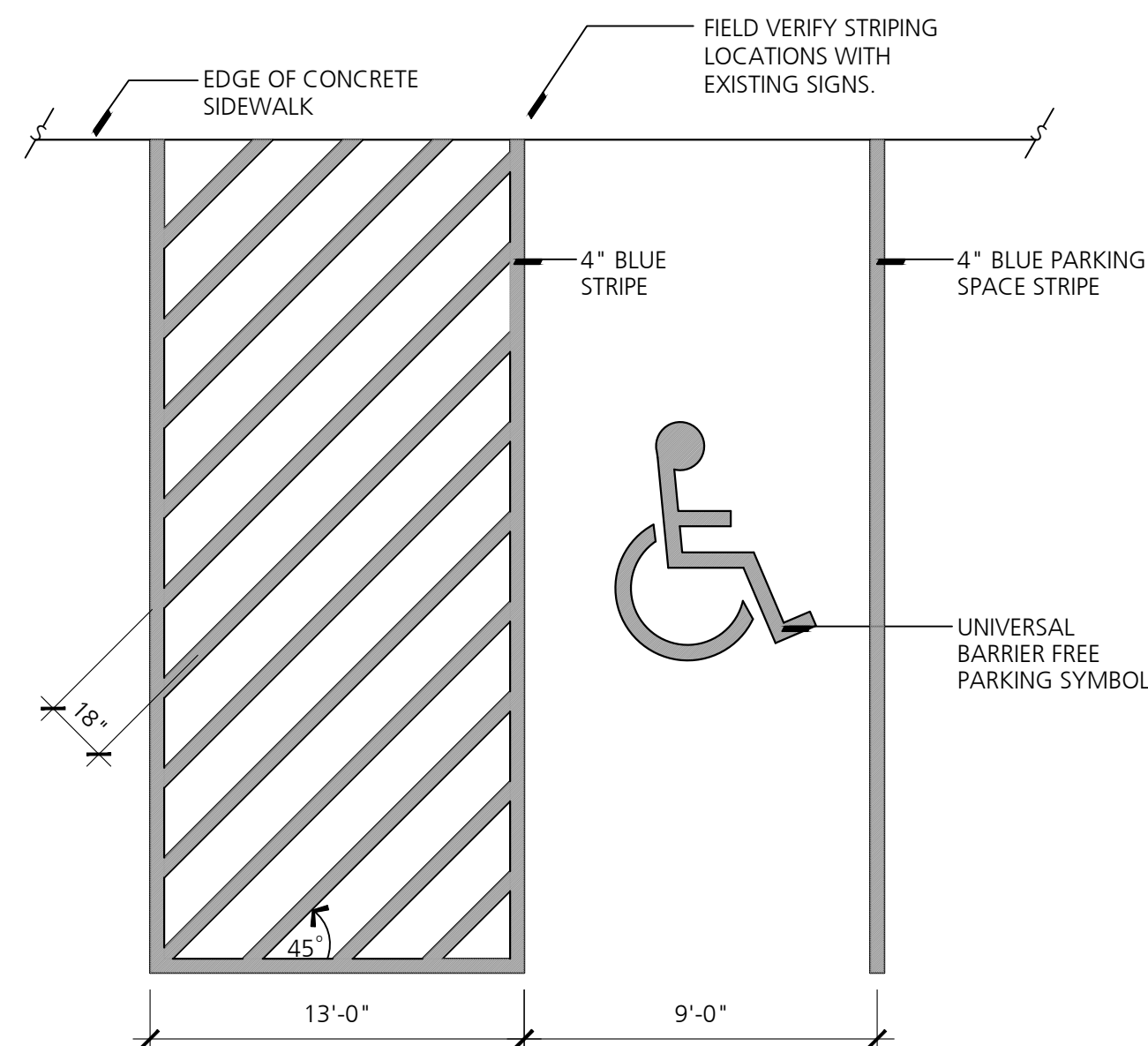
4 Concrete Ramp - Type 1
NO SCALE



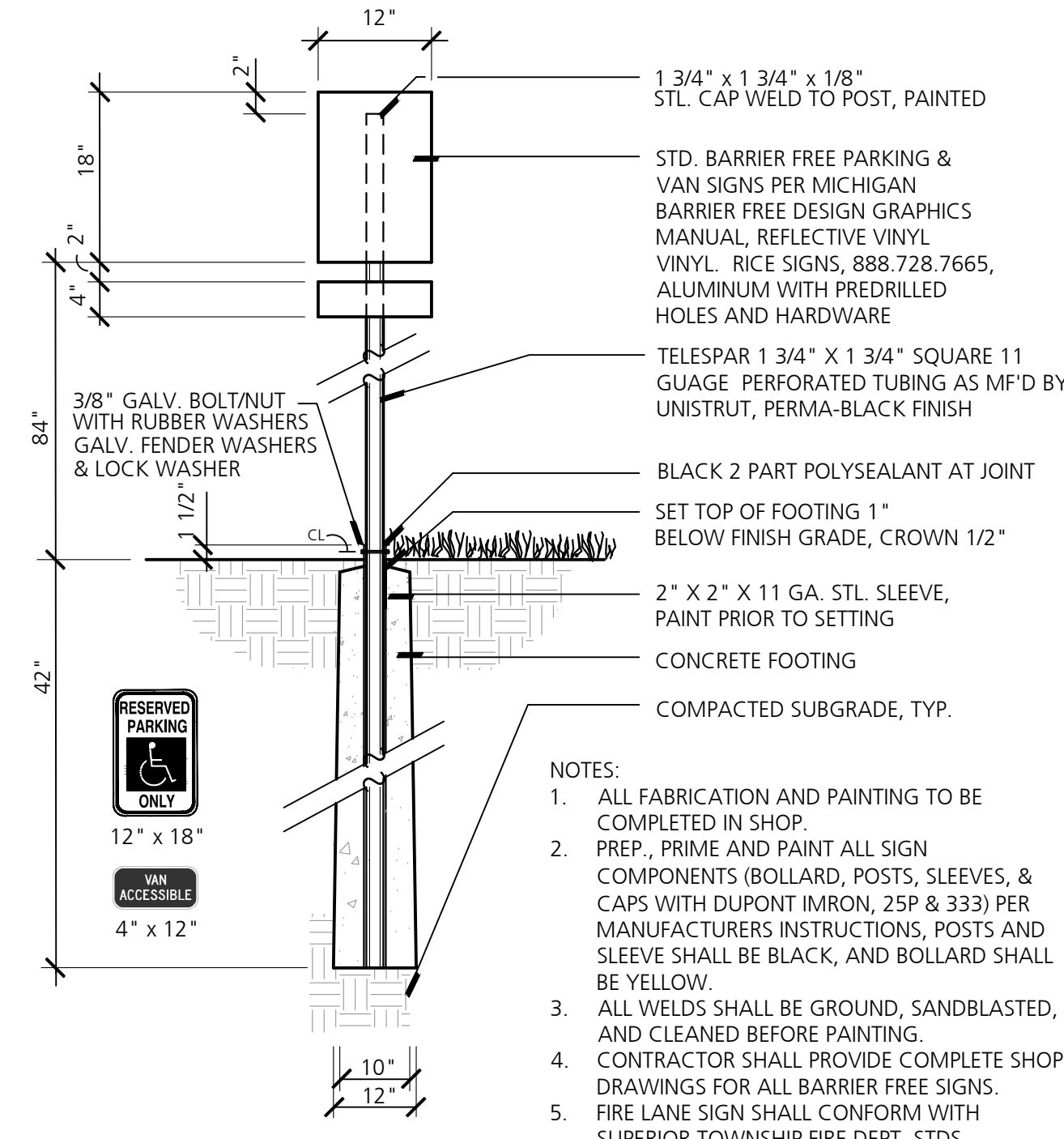
5 Concrete Ramp - Type 2
NO SCALE



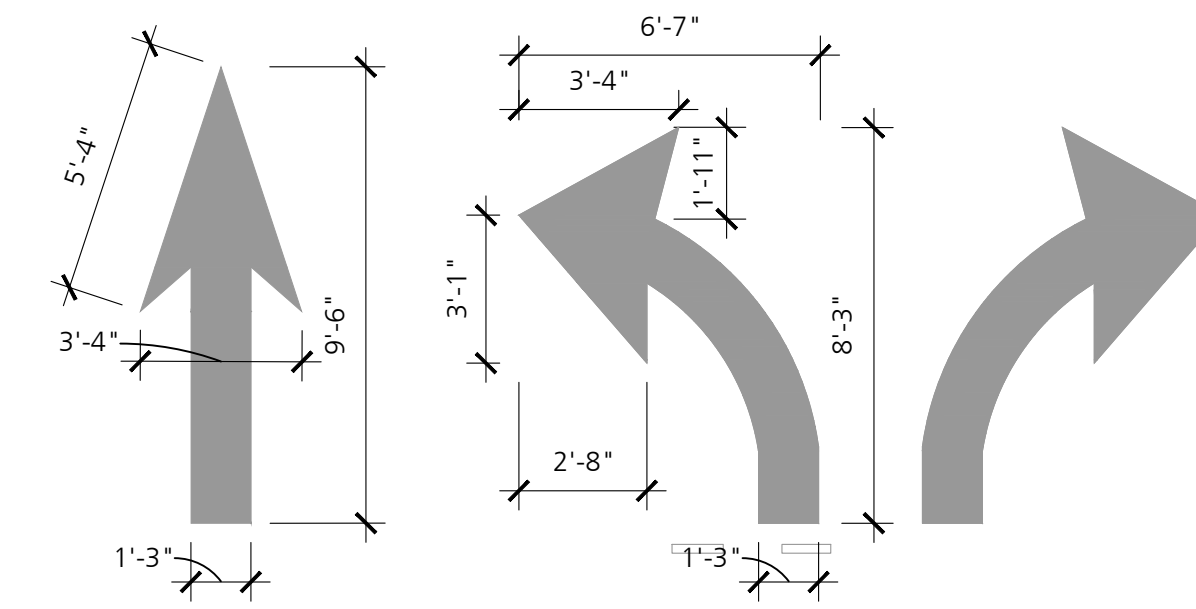
6 Crosswalk Striping
NO SCALE



7 Barrier Free Parking Stall Striping
NO SCALE



8 Barrier Free Sign
NO SCALE



9 Pavement Markings Arrows
NO SCALE



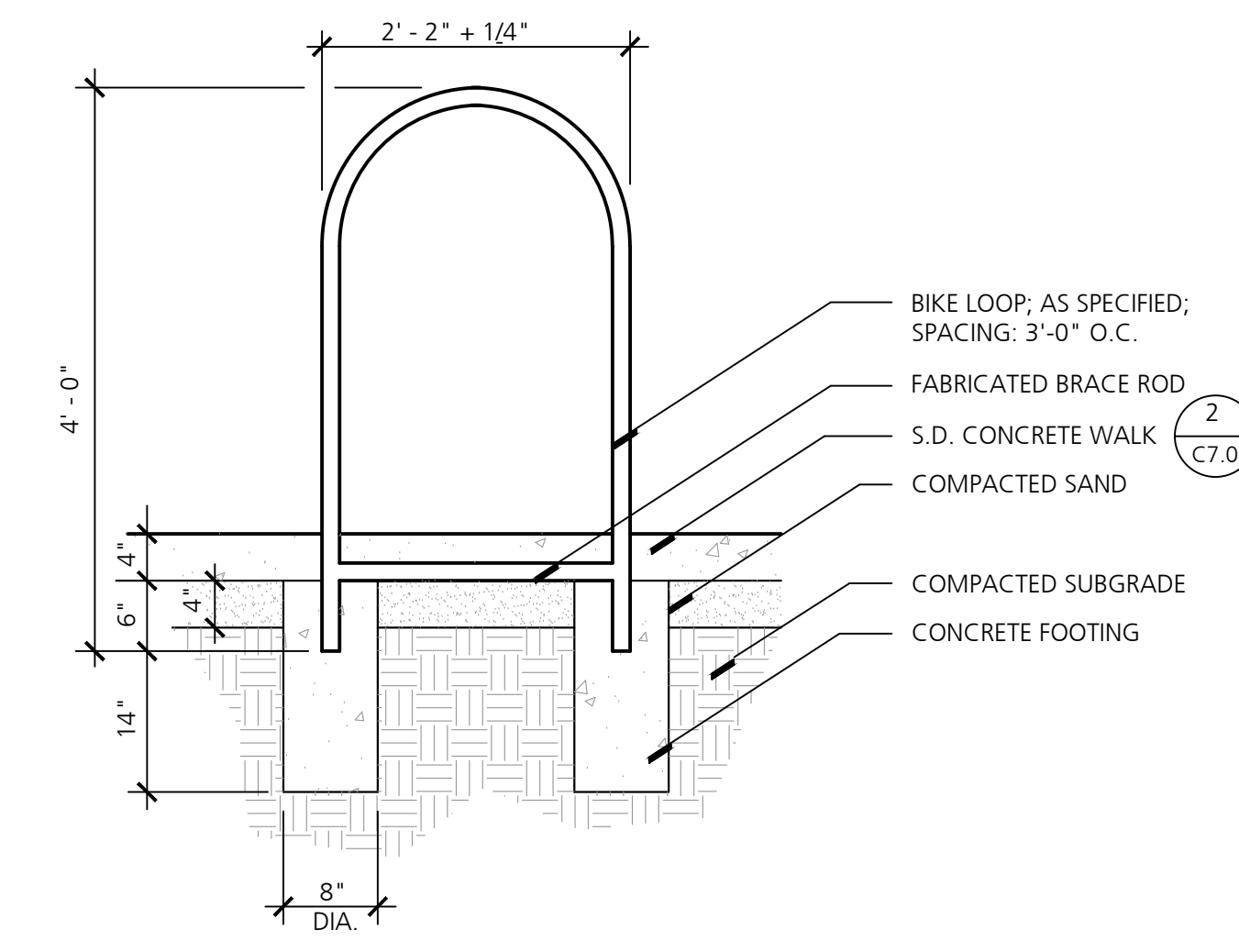
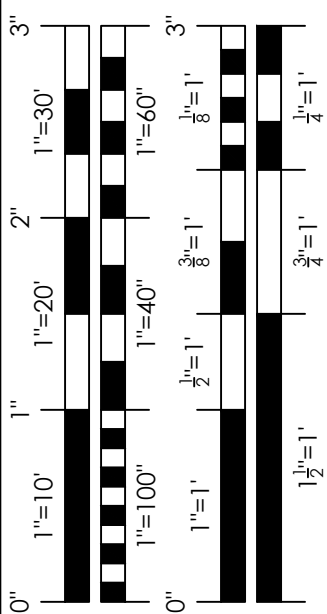
REVISIONS

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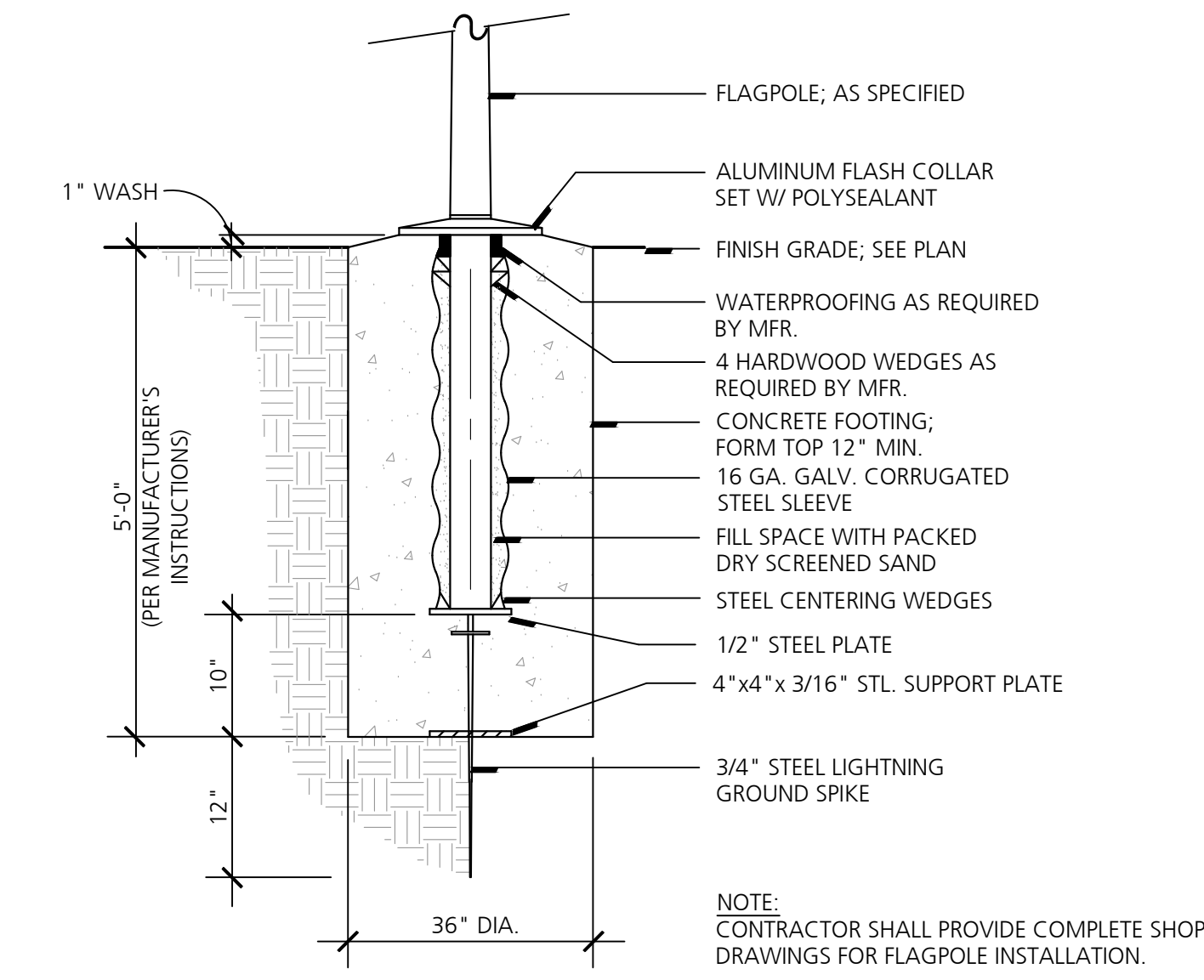


JOB	2017-55
DATE	25 SEPT 2020
DRAWN	BB
CHECKED	BB

DETAIL SYMBOL	(C7.0)
DETAIL NUMBER	
REFERENCE SHEET	



1 Bike Loop
NO SCALE



2 Flag Pole
NO SCALE



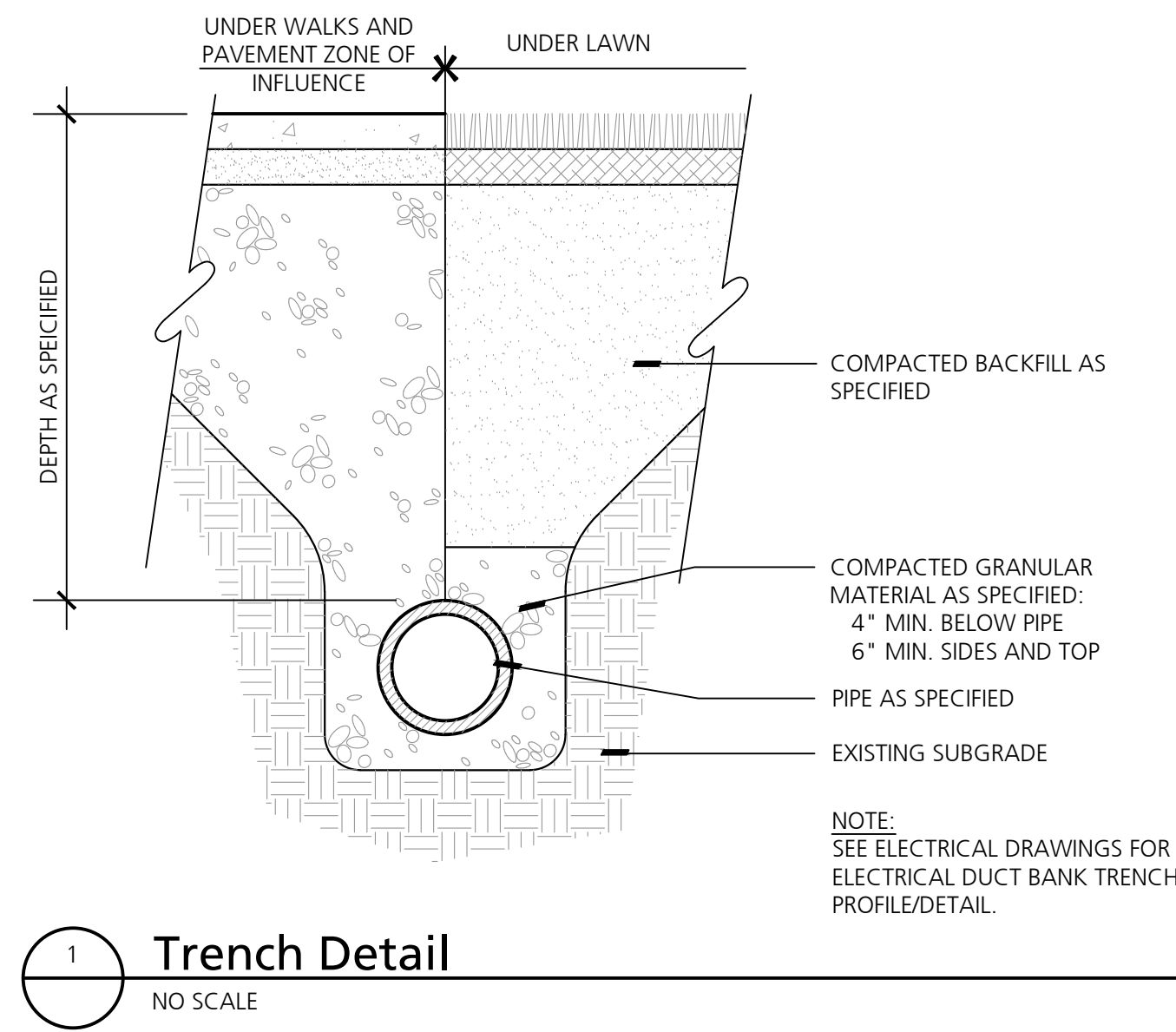
REVISIONS

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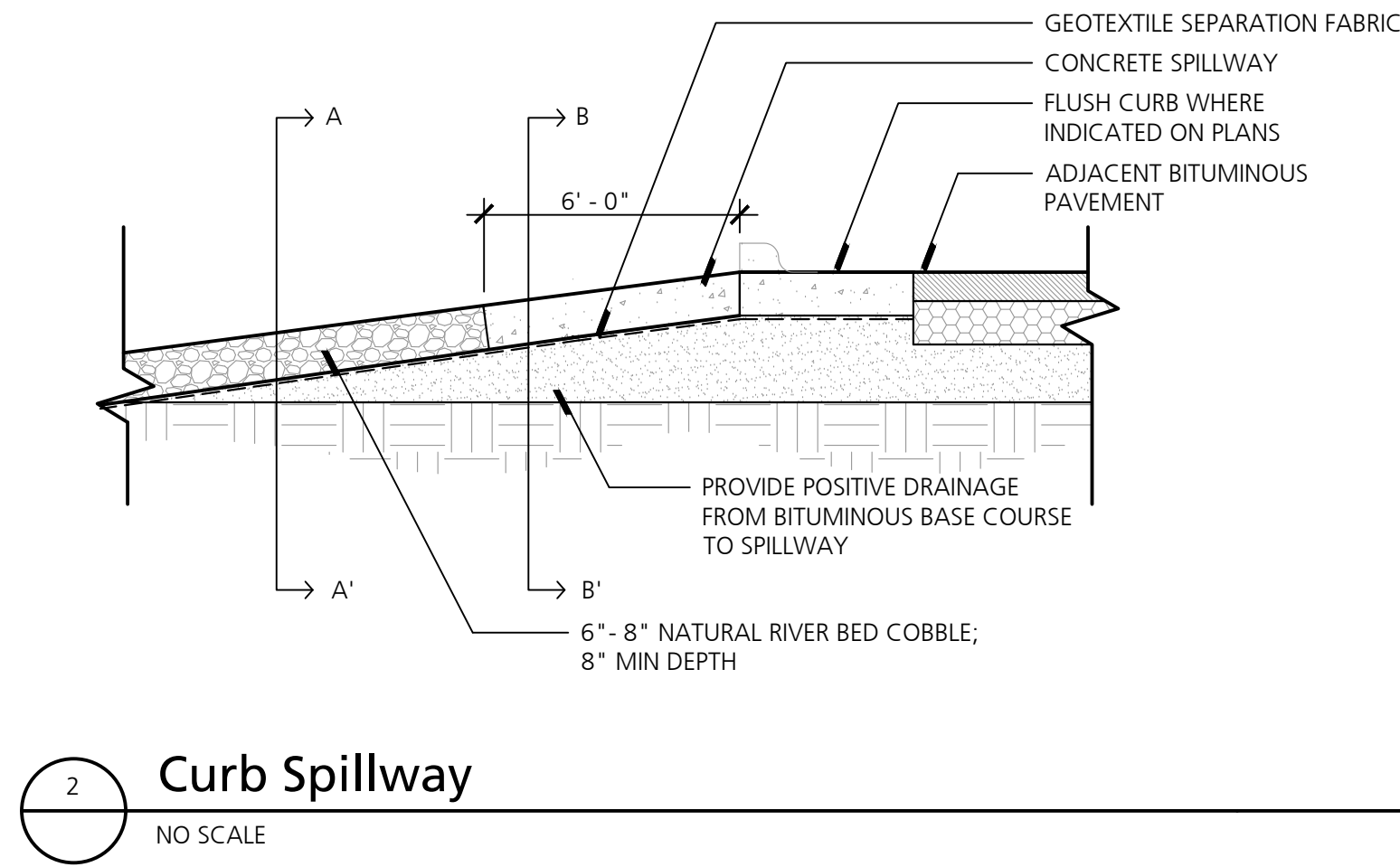
JOB 2017-55
DATE 25 SEPT 2020
DRAWN BB
CHECKED BB

DETAIL SYMBOL
DETAIL NUMBER
REFERENCE SHEET

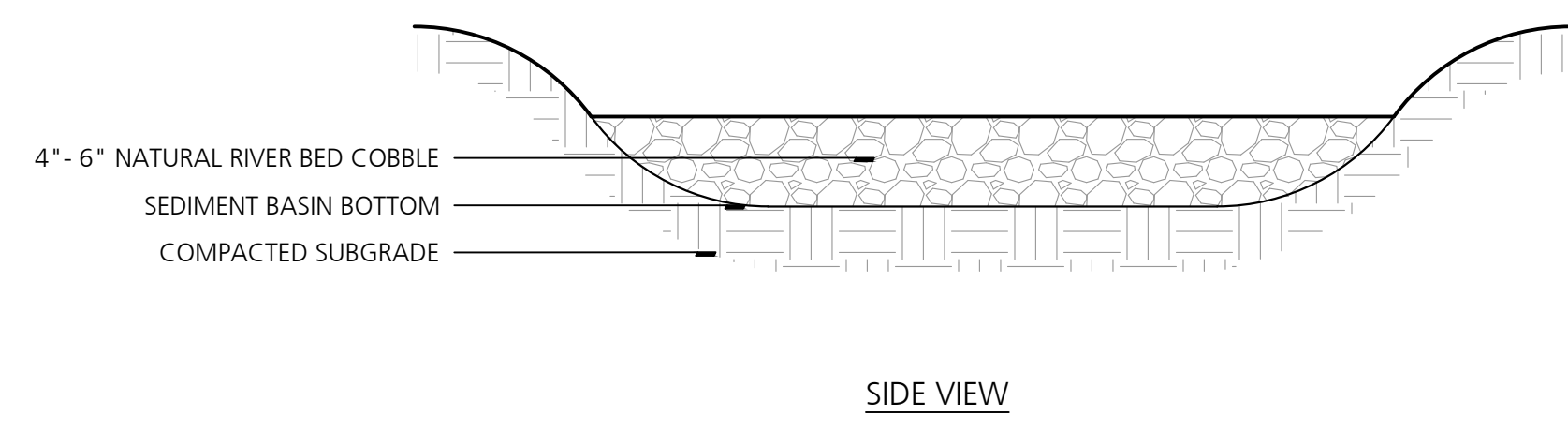
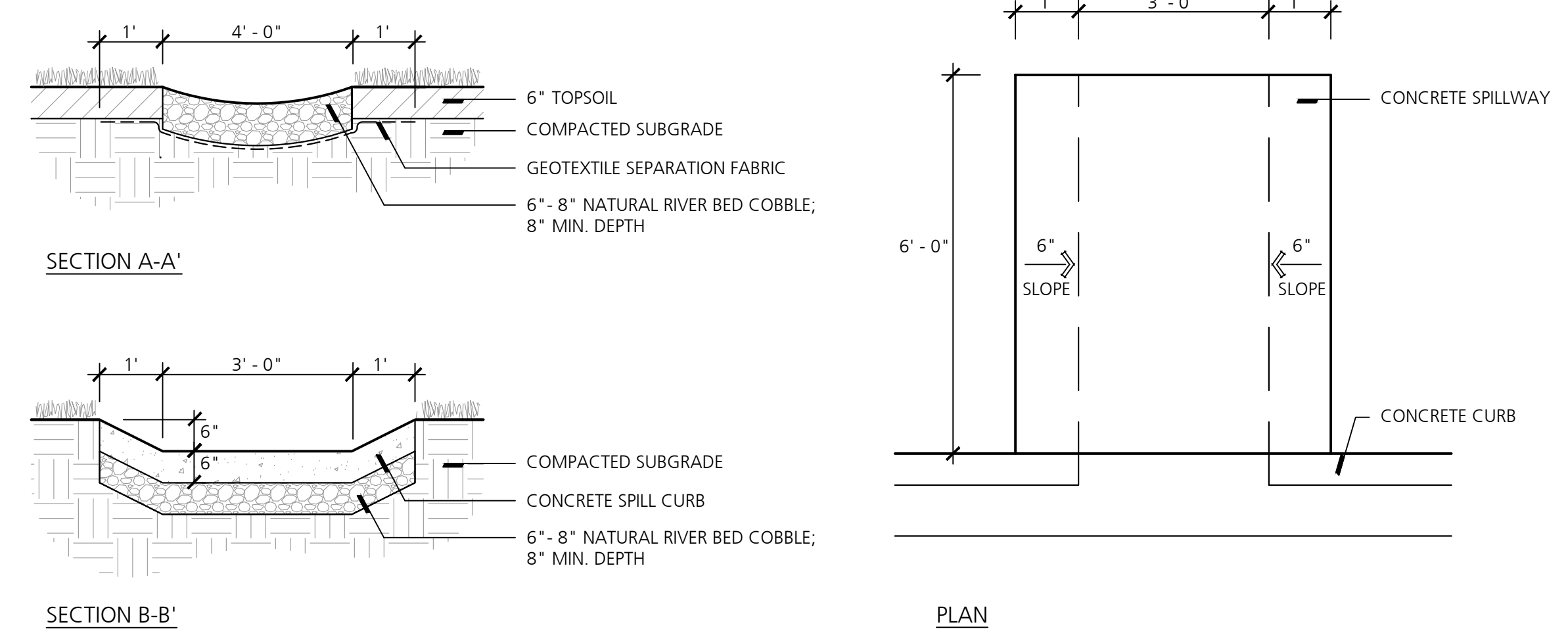
C7.1
YDL SUPERIOR



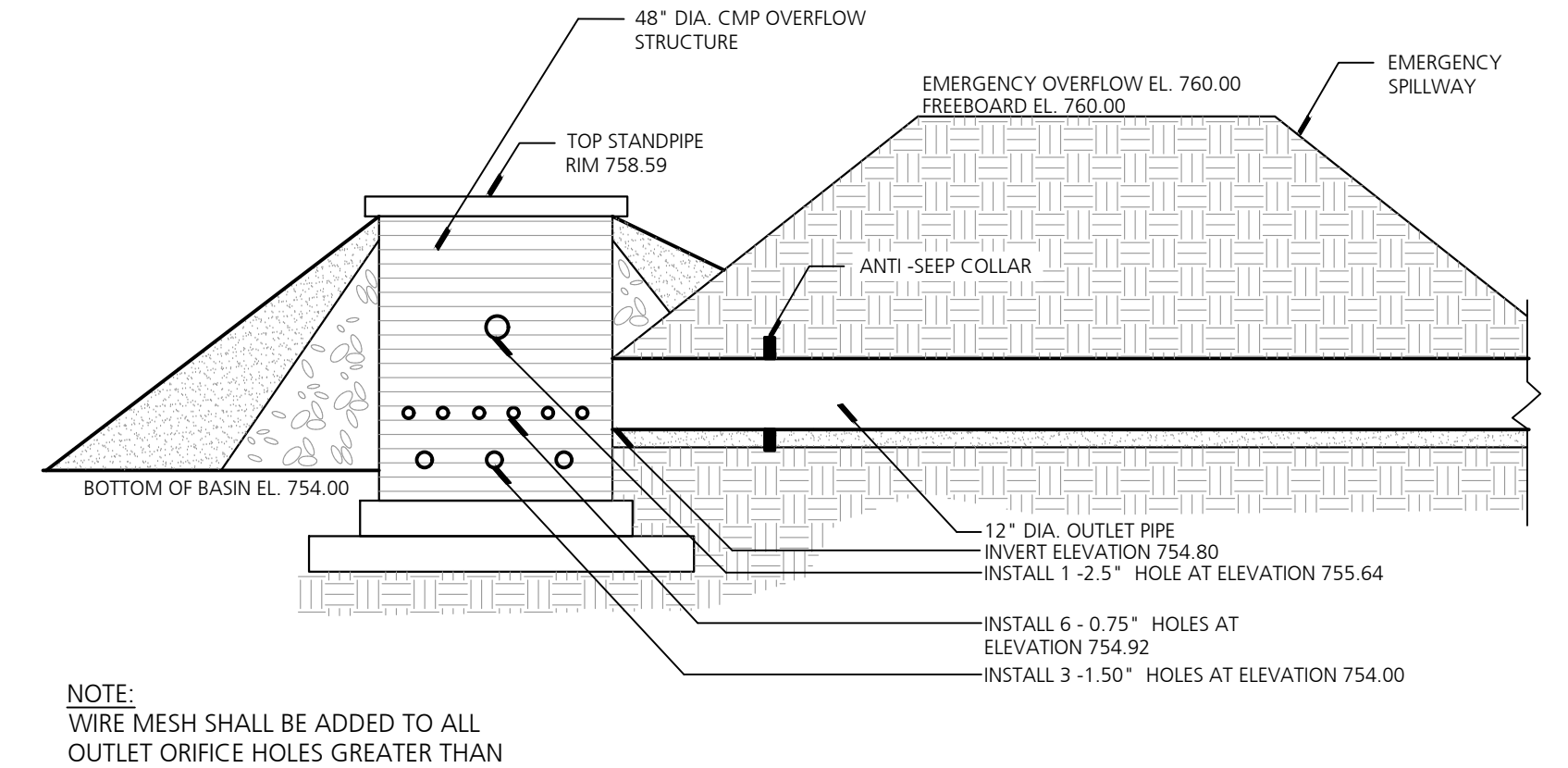
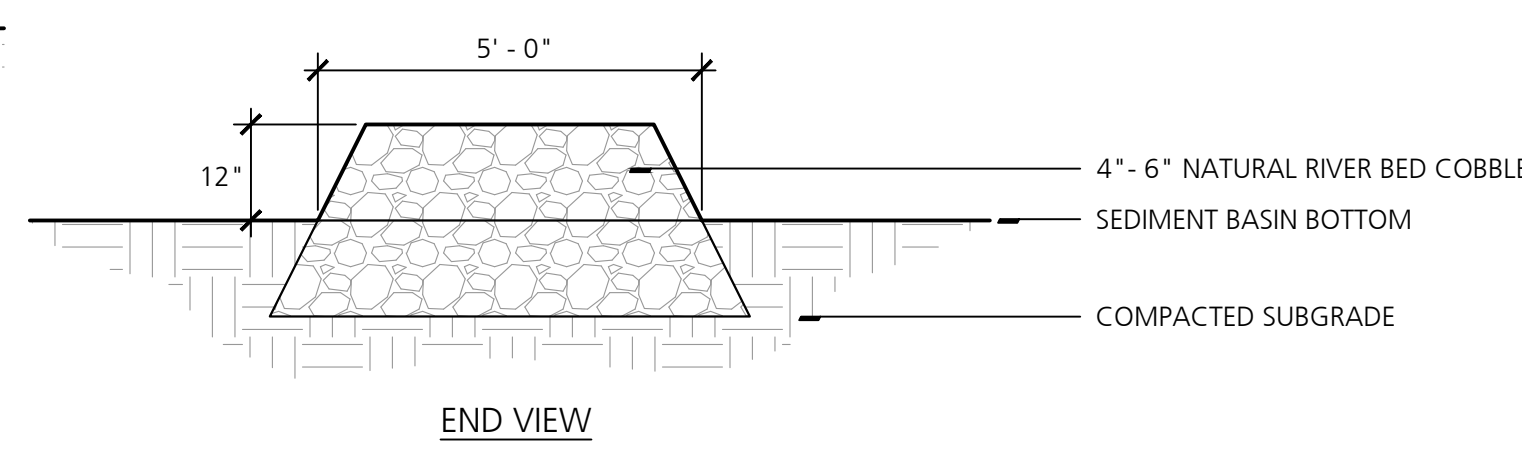
1 Trench Detail
NO SCALE



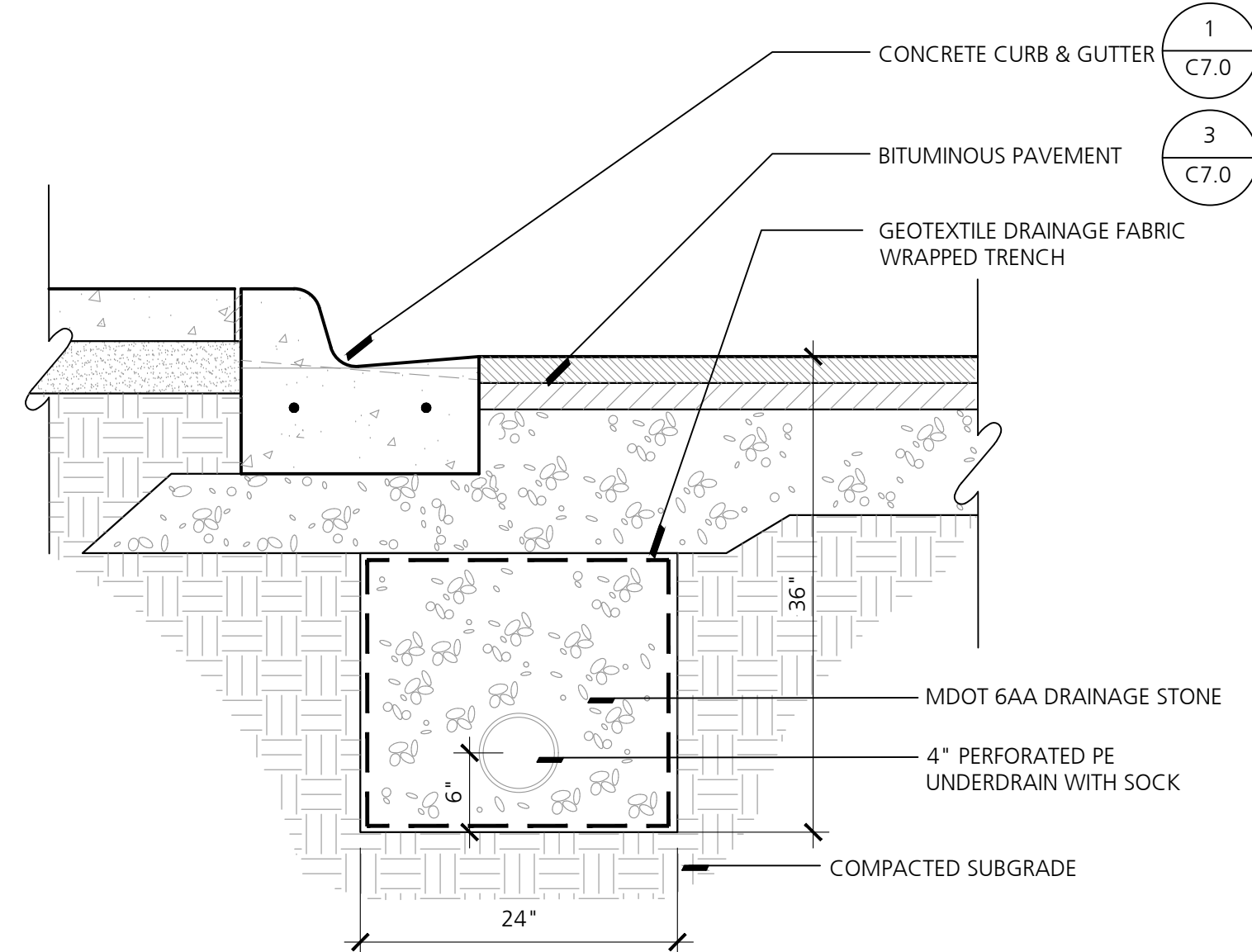
2 Curb Spillway
NO SCALE



3 Stone Filter Berm
NO SCALE



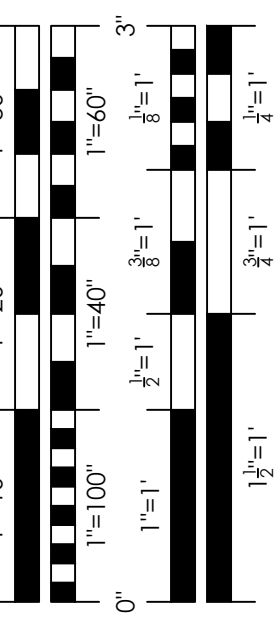
4 Outlet Control Structure Detail (R30)
NO SCALE



5 Edge Drain
NO SCALE

Storm Conveyance Calculations
NO SCALE

RUNOFF FROM DSN PT	RUNOFF TO DSN PT	INCRE AREA (ACRES)	IMPERVIOUS FACTOR "C"	EQUIV. AREA (acres)	ADDT. AREA (acres)	ACCUM. EQUIV. AREA (acres)	TIME OF CONCENT. (minutes)	RAINFALL RATE (in/hr)	QUANTITY OF RUNOFF (c.f./s)	ENTERING RUNOFF (c.f./s)	PIPE LENGTH (feet)	PIPE DIA. (inches)	UPPER INVERT (feet)	LOWER INVERT (feet)	PIPE SLOPE %	PIPE SLOPE CHECK	Manning n	SLOPE OF H.G. (%)	TIME TO NEXT M.H. (minutes)	TOTAL RUNOFF (c.f./s)	DISCHARGE Q (FULL) (c.f./s)	VELOCITY V (FULL) (ft./sec)	0.80 Point (feet)	LOWER H.G.L. (feet)	LOWER GROUND (feet)	UPPER H.G.L. (feet)	UPPER GROUND (feet)	DISTANCE FROM RIM TO HGL (feet)	COVER OVER PIPE (feet)
R5	R10	0.07	0.94	0.06		0.06	15.00	4.38	0.28		52	12	759.90	759.67	0.45%	0.45	0.013	0.01%	0.28	0.28	2.39	3.04	760.47	760.47	763.08	760.47	764.00	3.53	3.1
R10	R15	0.11	0.79	0.09		0.15	15.28	4.34	0.65		52	12	759.67	759.31	0.50%	0.50	0.013	0.03%	0.27	0.65	2.52	3.21	760.11	760.11	762.38	760.12	763.08	2.96	2.5
R15	R16	0.11	0.71	0.08		0.23	15.55	4.32	0.98		190	12	757.00	756.05	0.50%	0.50	0.013	0.08%	0.99	0.98	2.52	3.21	756.85	756.92	760.20	757.06	762.38	5.32	4.4
R16	R20	0.00	0	0.00		0.15	15.55	4.32	0.65		43	12	755.95	755.73	0.50%	0.50	0.013	0.03%	0.22	0.65	2.52	3.21	756.53	756.92	759.58	756.93	760.20	3.27	3.3
R20	R25	0.53	0.82	0.44	0.53	1.19	16.54	4.21	5.03		87	15	755.48	754.87	0.70%	0.70	0.013	0.61%	0.33	5.03	5.40	4.40	755.67	756.39	756.92	759.58	2.66	2.8	
R19	R20	0.24	0.86	0.20		0.20	15.00	4.38	0.89		44	12	756.82	756.60	0.50%	0.50	0.013	0.06%	0.23	0.89	2.52	3.21	757.40	756.92	759.58	756.95	760.32	3.37	2.5
R17	R18	0.24	0.90	0.21		0.21	15.00	4.38	0.93		11	12	756.96	756.90	0.50%	0.50	0.013	0.07%	0.06	0.93	2.52	3.21	757.70	757.70	760.32	757.71	760.46	2.75	2.5
R18	R20	0.13	0.86	0.11		0.33	15.06	4.37	1.43		62	12	756.80	756.50	0.50%	0.50	0.013	0.16%	0.32	1.43	2.52	3.21	757.30	756.92	759.58	757.02	760.32	3.30	2.5
R30	R35	0.00	0	0.00		0.00	15.00	4.38	0.00		67	12	754.80	754.49	0.45%	0.45	0.013	0.00%	0.37	0.00	2.39	3.04	755.29	755.29	758.59	755.29	759.88	4.59	4.1
R35	R40	0.00	0	0.00		0.00	15.37	4.33	0.00		194	12	754.39	753.52	0.45%	0.45	0.013	0.00%	1.06	0.00	2.39	3.04	754.32	754.32	758.94	754.32	759.88	5.56	4.5
R40	R45	0.00	0	0.00		0.00	16.43	4.22	0.00		256	12	753.42	752.27	0.45%	0.45	0.013	0.00%	1.40	0.00	2.39	3.04	753.07	753.07	755.36	753.07	758.94	5.87	4.5
R45	CB455	0.00	0	0.00		0.00	17.83	4.09	0.00		31	12	752.17	752.03	0.45%	0.45	0.013	0.00%	0.17	0.00	2.39	3.04	752.83	752.03	754.13	752.03	755.36	3.33	2.2



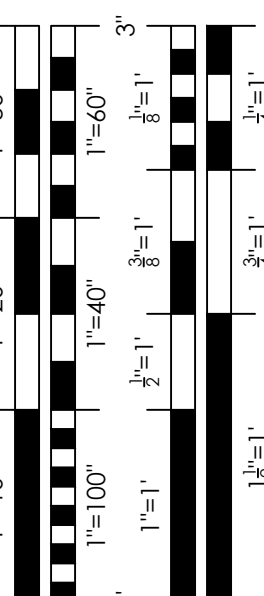
REVISIONS

PRELIM. SITE PLAN APPROVAL	21 FEB 2020
SESC & SITE CLEARING	11 SEPT 2020
FINAL SITE PLAN APPROVAL	25 SEPT 2020
FINAL SITE PLAN APPROVAL & WCMR REVIEW	03 NOV 2020
FINAL SITE PLAN APPROVAL & WCMR REVIEW	25 NOV 2020



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NO.	DATE	DESCRIPTION
1	21 FEB 2020	PRELIM. SITE PLAN APPROVAL
2	11 SEPT 2020	SEC & SITE CLEARING
3	25 SEPT 2020	FINAL SITE PLAN APPROVAL
4	03 NOV 2020	FINAL SITE PLAN APPROVAL & W/C/RV REVIEW
5	25 NOV 2020	FINAL SITE PLAN APPROVAL & W/C/RV REVIEW

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5	25 NOV 2020	FINAL SITE PLAN APPROVAL & W/C/RV REVIEW

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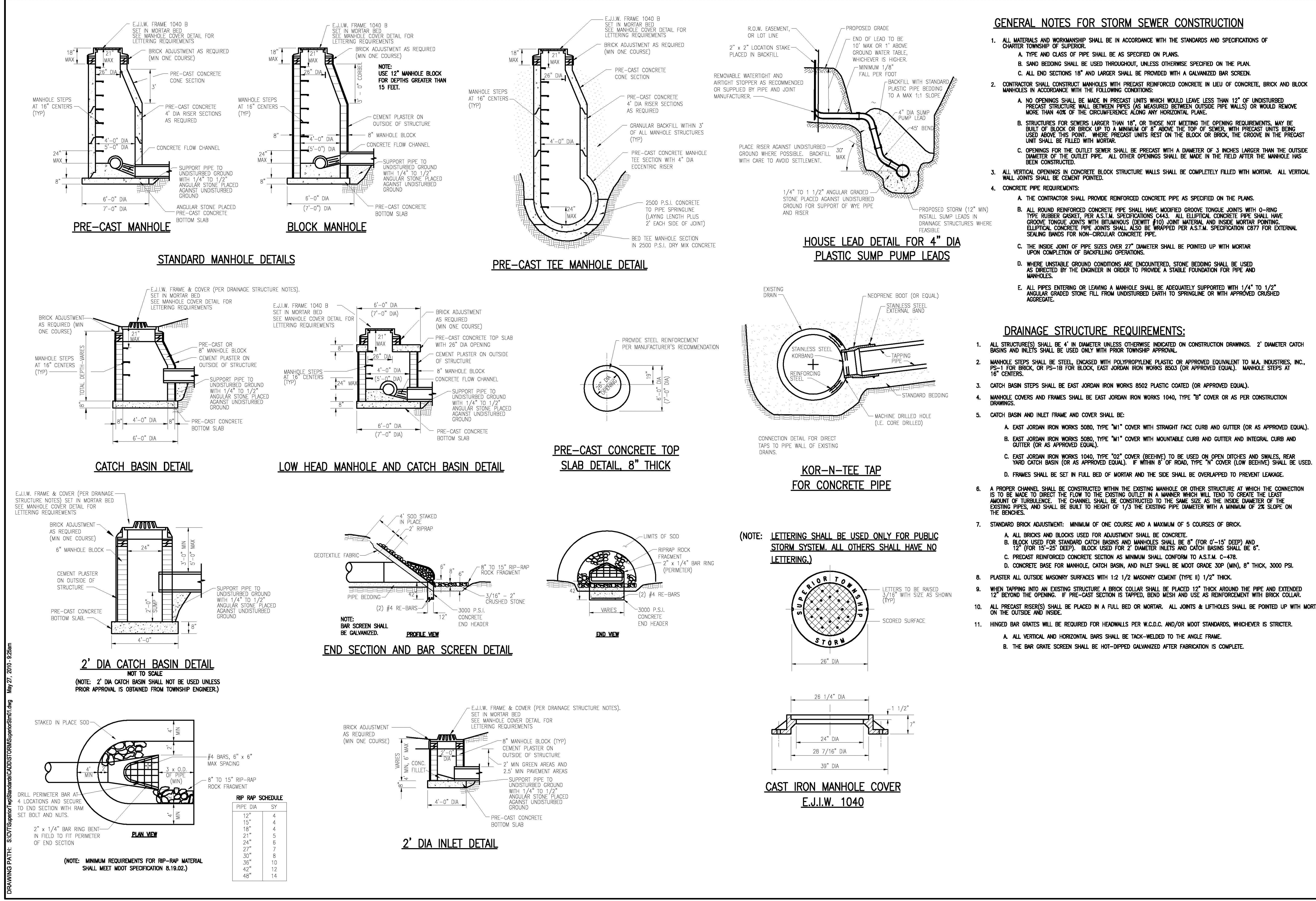
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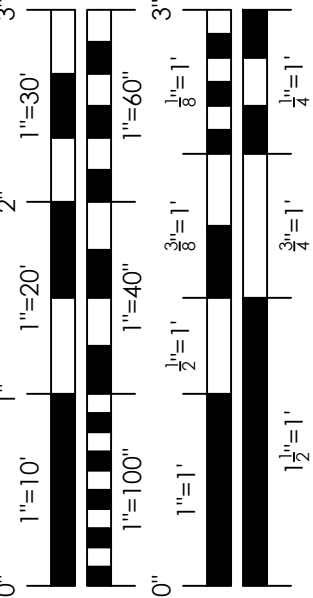
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<p>CHARTER TOWNSHIP OF SUPERIOR STANDARD STORM SEWER DETAILS</p>											





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FINAL SITE PLAN APPROVAL & NWCIR REVIEW	25 NOV 2020

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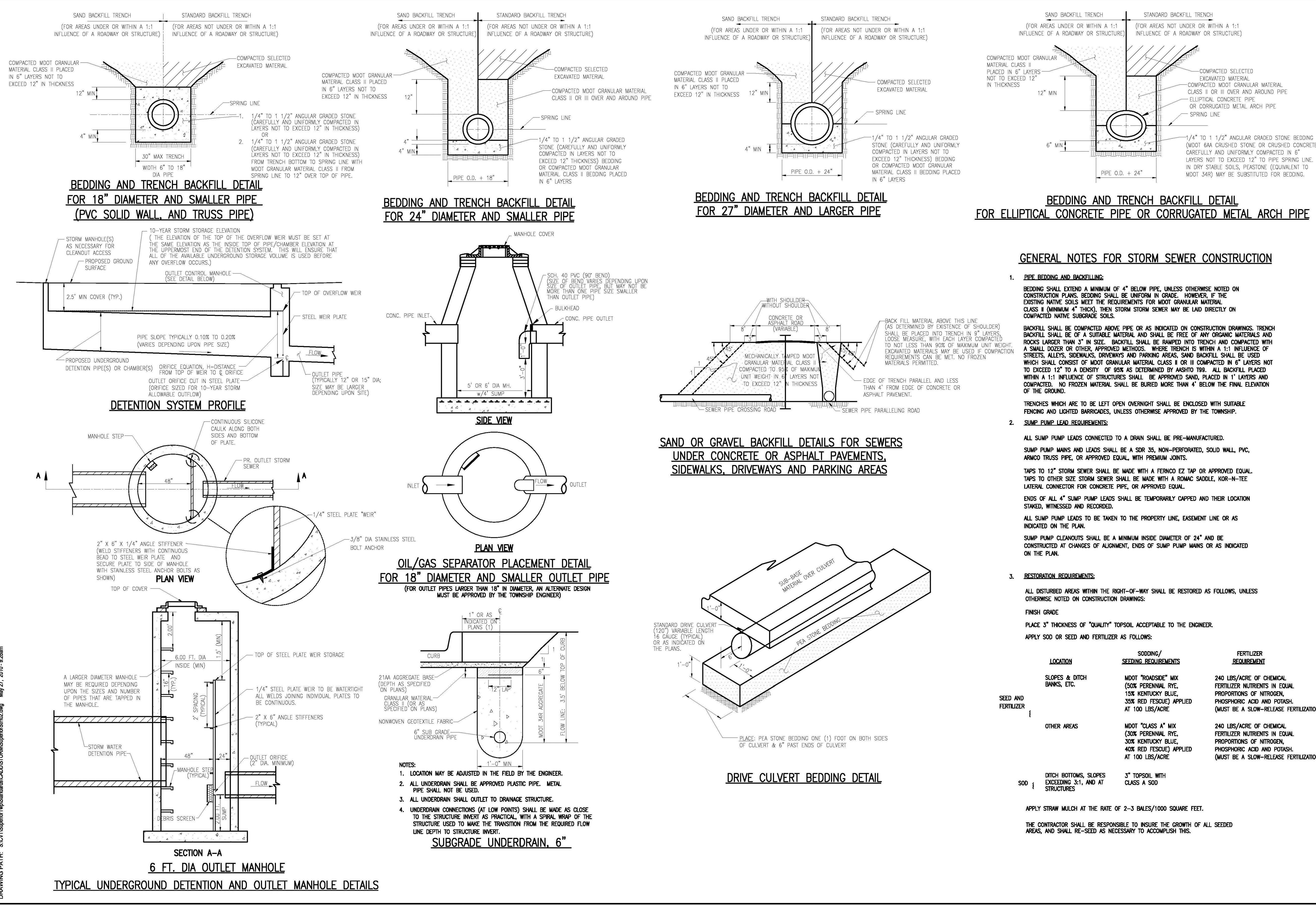
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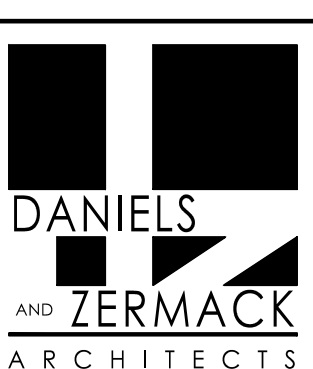
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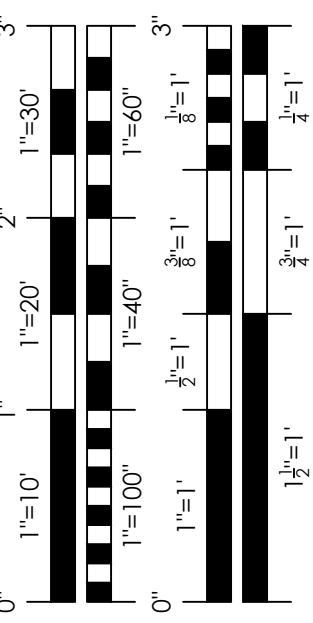
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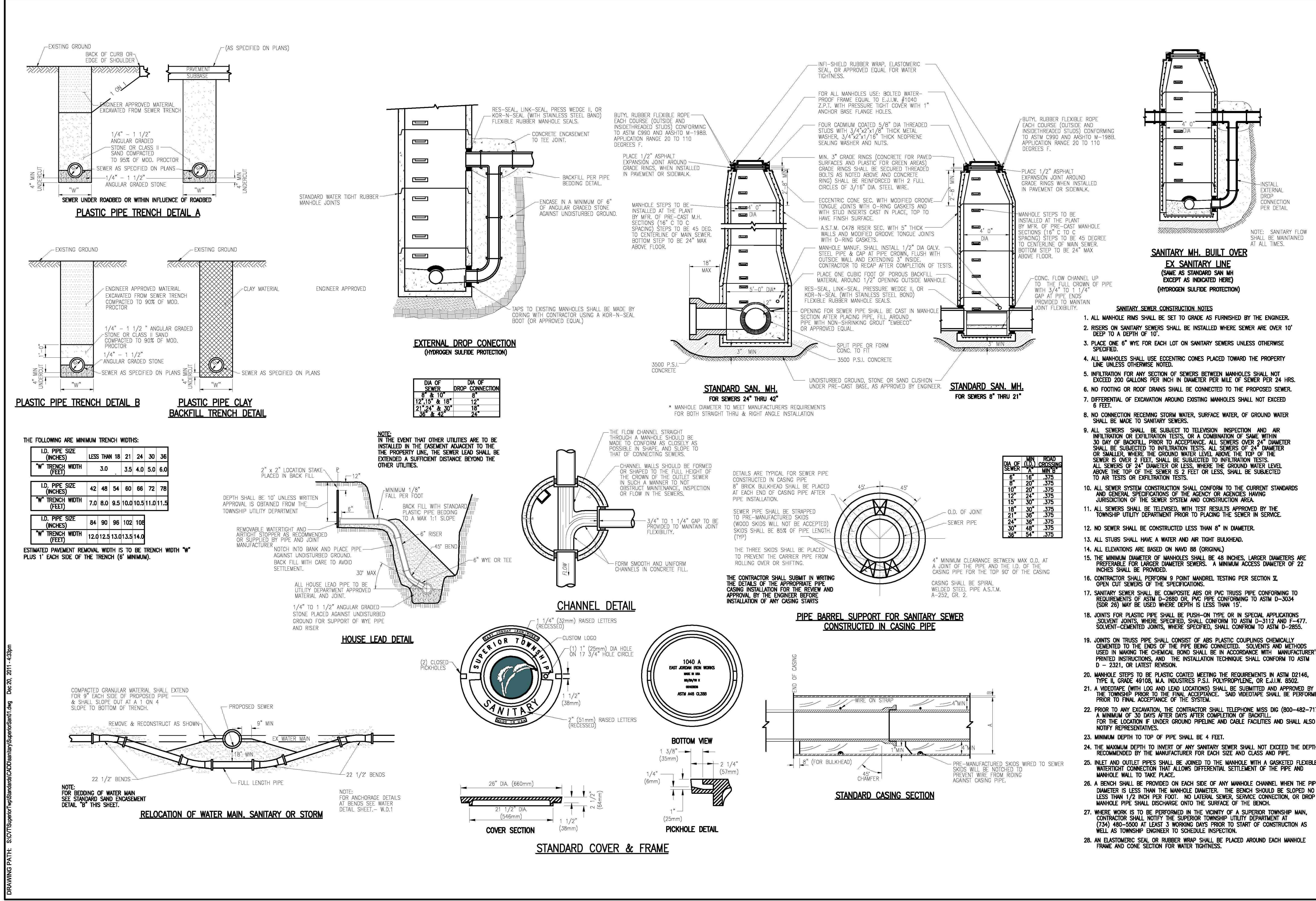
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DETAIL NUMBER
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CHARTER TOWNSHIP OF SUPERIOR STANDARD SANITARY DETAILS									



THE FOLLOWING ARE MINIMUM TRENCH WIDTHS:

I.D. PIPE SIZE (INCHES)	LESS THAN 18"	18"	24"	30"	36"
"W" TRENCH WIDTH (FEET)	3.0	3.5	4.0	5.0	6.0

I.D. PIPE SIZE (INCHES)	42"	48"	54"	60"	66"	72"	78"
"W" TRENCH WIDTH (FEET)	7.0	8.0	9.5	10.0	10.5	11.0	11.5

I.D. PIPE SIZE (INCHES)	84"	90"	96"	102"	108"
"W" TRENCH WIDTH (FEET)	12.0	12.5	13.0	13.5	14.0

ESTIMATED PAVEMENT REMOVAL WIDTH IS TO BE TRENCH WIDTH "W" PLUS 1' EACH SIDE OF THE TRENCH (6" MINIMUM).

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SANITARY SEWER ACCEPTANCE TESTS

GENERAL

ALL SANITARY SEWERS SHALL BE SUBJECTED TO INFILTRATION, EXFILTRATION OR LOW PRESSURE AIR TESTS, OR A COMBINATION THEREOF PRIOR TO FINAL ACCEPTANCE BY THE TOWNSHIP. IN ADDITION, ALL PVC AND ABS PLASTIC SEWERS SHALL BE SUBJECTED TO DEFLECTION TESTING BY MEANS OF A NINE-POINT MANDREL DEFLECTION TEST.

THE TOWNSHIP'S INSPECTOR SHALL BE PRESENT FOR ALL TESTING OPERATIONS. IF TESTING IS TO BE DONE BY THE CONTRACTOR, ONLY PROPERLY TRAINED PERSONNEL SHALL BE ALLOWED TO PERFORM THE TESTING WORK. IF TESTING IS TO BE DONE BY MUNICIPAL AGENCY WORK FORCES, THEN THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE INSPECTOR IN ORDER TO SCHEDULE THE TESTING.

IN THE EVENT THAT THE SEWER PIPE FAILS ANY OF THE REQUIRED TESTS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING THE PIPE AND REPEATING THE TEST UNTIL ACCEPTABLE RESULTS ARE ACHIEVED. THE METHOD OF TESTING AND MEASUREMENT SHALL BE APPROVED BY THE TOWNSHIP. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY EQUIPMENT AND LABOR FOR MAKING THE TESTS.

INFILTRATION TEST

ALL SANITARY SEWERS THAT ARE OVER TWENTY-FOUR (24) INCHES IN DIAMETER SHALL BE SUBJECTED TO AN INFILTRATION TEST. ALSO, ALL SANITARY SEWERS THAT ARE TWENTY-FOUR (24) INCHES IN DIAMETER AND SMALLER AND WHERE THE GROUND WATER LEVEL IS MORE THAN TWO (2) FEET ABOVE THE TOP OF THE SEWER SHALL BE SUBJECTED TO AN INFILTRATION TEST.

THE INFILTRATION RATE FOR ALL SANITARY SEWERS SHALL NOT EXCEED A MAXIMUM OF TWO HUNDRED (200) GALLONS PER INCH DIAMETER PER MILE OF SEWER PER TWENTY-FOUR (24) HOURS.

LOW PRESSURE AIR TEST

ALL SANITARY SEWERS THAT ARE TWENTY-FOUR (24) INCHES IN DIAMETER OR SMALLER AND WHERE THE GROUND WATER LEVEL IS TWO (2) FEET OR LESS ABOVE THE TOP OF THE SEWER SHALL BE SUBJECTED TO A LOW PRESSURE AIR TEST.

THE PROCEDURE FOR AIR TESTING OF SEWERS SHALL BE AS FOLLOWS:

THE SEWER LINE SHALL BE TESTED IN INCREMENTS BETWEEN MANHOLES. THE LINE SHALL BE CLEANED AND PLUGGED AT EACH MANHOLE. SUCH PLUGS SHALL BE DESIGNED TO HOLD AGAINST THE TEST PRESSURE AND SHALL PROVIDE AN AIRTIGHT SEAL. ONE OF THE PLUGS SHALL HAVE AN ORIFICE THROUGH WHICH AIR CAN BE INTRODUCED INTO THE SEWER. AN AIR SUPPLY LINE SHALL BE CONNECTED TO THE ORIFICE. THE SUPPLY LINE SHALL BE FITTED WITH SUITABLE CONTROL VALVES AND A PRESSURE GAUGE FOR CONTINUALLY MEASURING THE AIR PRESSURE IN THE SEWER. THE PRESSURE GAUGE SHALL HAVE A MINIMUM DIAMETER OF THREE AND ONE-HALF (3-1/2) INCHES AND A RANGE OF 0 - 10 PSIG. THE GAUGE SHALL HAVE MINIMUM DIMENSIONS OF 0-10 PSIG AND ACCURACY OF PLUS OR MINUS (+/-) 0.04 PSIG.

THE SEWER SHALL BE PRESSURIZED TO 4 PSIG GREATER THAN THE GREATEST BACK PRESSURE CAUSED BY GROUND WATER OVER THE TOP OF THE SEWER PIPE. AT LEAST TWO (2) MINUTES SHALL BE ALLOWED FOR THE AIR PRESSURE TO STABILIZE BETWEEN THREE AND ONE HALF (3.5) AND FOUR (4) PSIG. IF NECESSARY, AIR SHALL BE ADDED TO THE SEWER TO MAINTAIN A PRESSURE OF 3.5 PSIG OR GREATER.

AFTER THE STABILIZATION PERIOD, THE AIR SUPPLY CONTROL VALVE SHALL BE CLOSED SO THAT NO MORE AIR WILL ENTER THE SEWER. THE SEWER AIR PRESSURE SHALL BE NOTED AND TIMING FOR THE TEST BEGUN. THE TEST SHALL NOT BEGIN IF THE AIR PRESSURE IS LESS THAN THREE AND ONE HALF (3.5) PSIG, OR SUCH OTHER PRESSURE AS IS NECESSARY TO COMPENSATE FOR GROUND WATER LEVEL.

THE TIME REQUIRED FOR THE AIR PRESSURE TO DECREASE ONE (1.0) PSIG DURING THE TEST SHALL NOT BE LESS THAN THE TIME SHOWN IN THE FOLLOWING AIR TEST TABLES. THE CONTRACTOR SHALL USE THE APPROPRIATE TEST TABLE BASED UPON THE SEWER PIPE MATERIAL.

AIR TEST TABLE FOR VITRIFIED CLAY AND CONCRETE PIPE

Table with columns: PIPE DIAMETER, INCHES (4, 6, 8, 10, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, 42) and LENGTH OF PIPE, FEET (25, 50, 75, 100, 125, 150, 175, 200, 225, 250, 275, 300, 350, 400, 450, 500). Rows show specification time in minutes and seconds.

NOTE: THIS TABLE IS TAKEN FROM THE NATIONAL CLAY PIPE INSTITUTE (NCP) TABLES WHICH ARE BASED UPON ASTM C828 "TEST METHOD FOR LOW PRESSURE AIR TEST FOR VITRIFIED CLAY PIPE LINES" AND ASTM C924 "STANDARD PRACTICE FOR TESTING CONCRETE PIPE SEWER LINES BY LOW PRESSURE AIR TEST METHOD."

AIR TEST TABLE FOR PVC AND ABS PIPE
MINIMUM SPECIFIED TIME REQUIRED FOR A 1.0 PSIG PRESSURE DROP FOR SIZE AND LENGTH OF PIPE INDICATED FOR Q=0.0015*

THE MINIMUM HOLDING TIME FOR THE PRESSURE TO DROP FROM 3.5 TO 2.5 PSIG (GREATER THAN ADDED GROUND WATER PRESSURE) SHALL NOT BE LESS THAN THAT GIVEN IN THE FOLLOWING TABLE FOR EACH TESTED RUN OF SEWER BETWEEN MANHOLES:

Table with columns: PIPE DIAMETER (INCHES), MINIMUM TIME (MINUTES), LENGTH FOR MINIMUM TIME (FT.), TIME FOR LONGER (LENGTH, S.), and SPECIFICATION TIME FOR LENGTH (L) SHOWN, MINUTES (100 FT, 150 FT, 200 FT, 250 FT, 300 FT, 350 FT, 400 FT, 450 FT).

NOTE: THIS TABLE IS TAKEN FROM ASTM F1417 "STANDARD TEST METHOD FOR INSTALLATION AND ACCEPTANCE OF PLASTIC GRAVITY SEWER LINES USING LOW PRESSURE AIR TEST." ASTM F1417 CONFORMS TO UN-BELL "RECOMMENDED PRACTICE FOR LOW PRESSURE AIR TESTING OF INSTALLED SEWER PIPE" (UN-B-6-98)

* Q IS THE ALLOWABLE LEAKAGE RATE IN CUBIC FEET/MINUTE/SQUARE FOOT OF INSIDE SURFACE AREA OF PIPE

EXFILTRATION TEST

EXFILTRATION OR LEAKAGE FROM THE SEWER LINE CAN BE MEASURED BY RECORDING THE WATER LEVEL DROP OVER A GIVEN PERIOD OF TIME IN A STANDPIPE PLACED AND CONNECTED IN THE UPSTREAM MANHOLE. THE MEASURED DROP IN THE TIME PERIOD CAN BE CONVERTED BY CALCULATIONS TO THE LEAKAGE RATE IN TERMS OF GALLONS PER INCH OF PIPE DIAMETER PER MILE PER DAY.

EXFILTRATION TESTS MAY BE SUBSTITUTED FOR LOW PRESSURE AIR TESTS WHERE APPROVED BY THE TOWNSHIP ENGINEER. EXFILTRATION TESTS WILL NOT BE ALLOWED WHERE THE EXTERNAL WATER PRESSURE EXCEEDS FOUR (4) FEET.

FOR THE PURPOSE OF EXFILTRATION TESTING, THE INTERNAL WATER LEVEL SHALL BE EQUAL TO THE EXTERNAL WATER LEVEL PLUS FOUR (4) FEET AS MEASURED FROM THE TOP OF THE HIGHEST PIPE IN THE SYSTEM BEING TESTED. THIS COULD BE EITHER A HOUSE LEAD OR A LATERAL. HOWEVER, THE MAXIMUM TOTAL HEIGHT OF WATER ABOVE THE INVERT OF THE PIPE AT THE LOWER END SHALL NOT EXCEED SIXTEEN (16) FEET. A PROSPECTIVE TEST THAT WOULD EXCEED THIS SIXTEEN (16) FOOT LIMIT SHOULD NOT BE TAKEN. THE LINE UNDER CONSTRUCTION CAN BE BROKEN DOWN INTO SMALLER SECTIONS SUCH THAT THE MAXIMUM HEAD OF SIXTEEN (16) FEET WILL NOT BE EXCEEDED.

THE MAXIMUM EXFILTRATION RATE SHALL BE THE SAME AS THAT PERMITTED FOR THE INFILTRATION TEST. THE EXFILTRATION TEST PROCEDURE IS SUMMARIZED AS FOLLOWS:

- 1) ALL SERVICE laterals, stubs and fittings into the sewer line(s) being tested should be properly capped or plugged, and carefully braced to resist the thrust actions developed by the internal water pressure. In preparing the blocking of plugs or end caps, it is extremely important to recognize that the five (5) to ten (10) feet of head in the standpipe will exert considerable thrust against the plugs or caps.
2) A plug is inserted and tightened in the inlet pipe of the downstream manhole to which the water supply connection is made for filling the pipe.
3) The upper manhole is plugged and securely tightened for connection to the standpipe. The standpipe is then placed in this manhole and connected to the tapped plug. The standpipe must be capable of handling from five (5) to ten (10) feet of water head to determine the tightness and soundness of the sewer line, as specified and directed by the engineer.
4) Water is introduced into the line at the downstream (lower) manhole until the standpipe in the upstream manhole has been completely filled. By filling the line from the lowest level, the air in the line is easily pushed ahead and, finally dispelled through the standpipe at the upper end of the test section. Care should be taken to minimize entrapped air that will give distorted test results. The rate of drop in the standpipe may be quite rapid until the air has been expelled.
5) After filling with water, the line must be allowed to stand for at least four (4) hours before beginning the test. During this time some water absorption into the manhole structures and sewer pipe will take place. After the water absorption has stabilized, the water level in the standpipe is checked and water added if necessary.
6) The test is now ready to begin. The drop in the standpipe is measured and recorded over a fifteen (15) minute period. To verify the first results, a second fifteen (15) minute test is suggested. This will also verify whether a stable condition exists in the line.
7) The measured drops in the standpipe are converted to leakage in terms of gallons per inch diameter per mile per day.
8) Another commonly used method of conducting water exfiltration testing is to utilize the manhole in lieu of a standpipe. The test procedure is exactly as outlined for using the standpipe. However, since the manhole is larger in diameter than the standpipe, this method normally requires a minimum two (2) hour test period in order to be able to record a measurable water level drop. Manhole leakage must also be considered in the leakage rate and test results.
9) Caution should be taken about conducting exfiltration tests on sewer lines laid on steep grades. Consideration must be given to the downstream portion of the system to prevent excessive pressures in these lower lines. For these installations and where the upstream manholes are very deep, it is not advisable to fill the standpipe or manhole to the top when performing the test.

DEFLECTION TEST FOR PLASTIC PIPE

DEFLECTION GAUGE (MANDREL): MANDREL TESTING SHALL TAKE PLACE TO ENSURE THE FLEXIBLE PIPE HAS BEEN PROPERLY BEDDED AND BACK-FILLED. THE DEFLECTION TEST MUST BE CONDUCTED NO LESS THAN 30 DAYS AFTER INSTALLATION OF THE FINAL BACKFILL. THE MAXIMUM ALLOWABLE DEFLECTION IS 5 PERCENT. INSTALLATION SHALL CONFORM TO ASTM 2321-89. A NINE-ARM (POINT) MANDREL SHALL BE USED. CHERNE FIXED STEEL DEFLECTION OR APPROVED EQUAL.

VIDEOTAPE

AS A MEANS OF INSURING THAT PIPE LAYING WAS PROPERLY DONE AND THAT ALL JOINTS ARE IN A "HOME" POSITION, THE CONTRACTOR SHALL PROVIDE VIDEOTAPE OF ALL OF THE PIPE LAD THAT IS THIRTY-SIX (36) INCHES IN DIAMETER AND SMALLER. THIS VIDEOTAPE SHALL BE DONE NO SOONER THAN THIRTY (30) DAYS AFTER COMPLETION OF BACKFILL. THE CONTRACTOR SHALL PROVIDE FORTY-EIGHT (48) HOURS NOTICE TO THE TOWNSHIP PRIOR TO VIDEOTAPE SO THAT A REPRESENTATIVE MAY BE PRESENT. A SATISFACTORY REVIEW OF THE VIDEOTAPE BY THE TOWNSHIP SHALL BE A CONDITION FOR SEWER ACCEPTANCE BY THE TOWNSHIP. TYPICAL ITEMS TO BE REVIEWED ON THE VIDEOTAPE WILL INCLUDE PIPE DEFLECTION, PIPE SETTLEMENT, LEAD CONNECTIONS, JOINTS AND PIPE CLEANLINESS. IF THE VIDEOTAPE REVIEW REVEALS UNSATISFACTORY CONDITIONS, THE CONTRACTOR SHALL CORRECT THE CONDITIONS AND SHALL RE-VIDEOTAPE THE AFFECTED PIPE SECTIONS FOR REVIEW BY THE TOWNSHIP.



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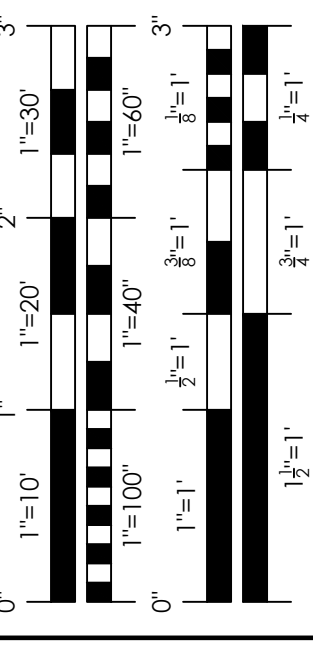
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JOB: 2017-55
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NO.	DATE	DESCRIPTION
1	11/25/2020	PRELIM. SITE PLAN APPROVAL 21 FEB 2020
2	11/25/2020	SEC & SITE CLEARING 11 SEPT 2020
3	03/11/2021	FINAL SITE PLAN APPROVAL 25 SEPT 2020
4	03/11/2021	FINAL SITE PLAN APPROVAL & W/C/R REVIEW 03 NOV 2020
5	03/11/2021	FINAL SITE PLAN APPROVAL & W/C/R REVIEW 25 NOV 2020

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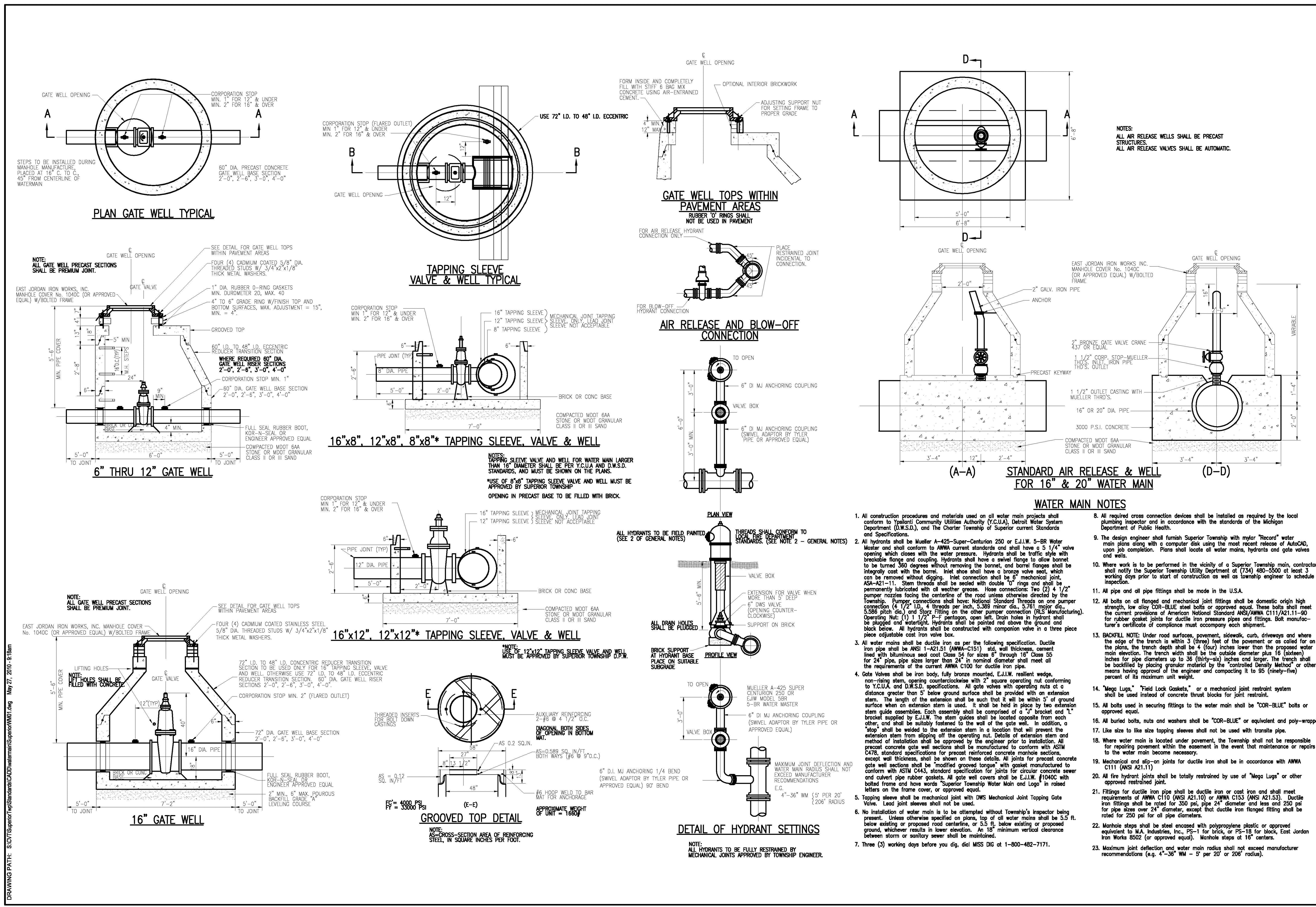
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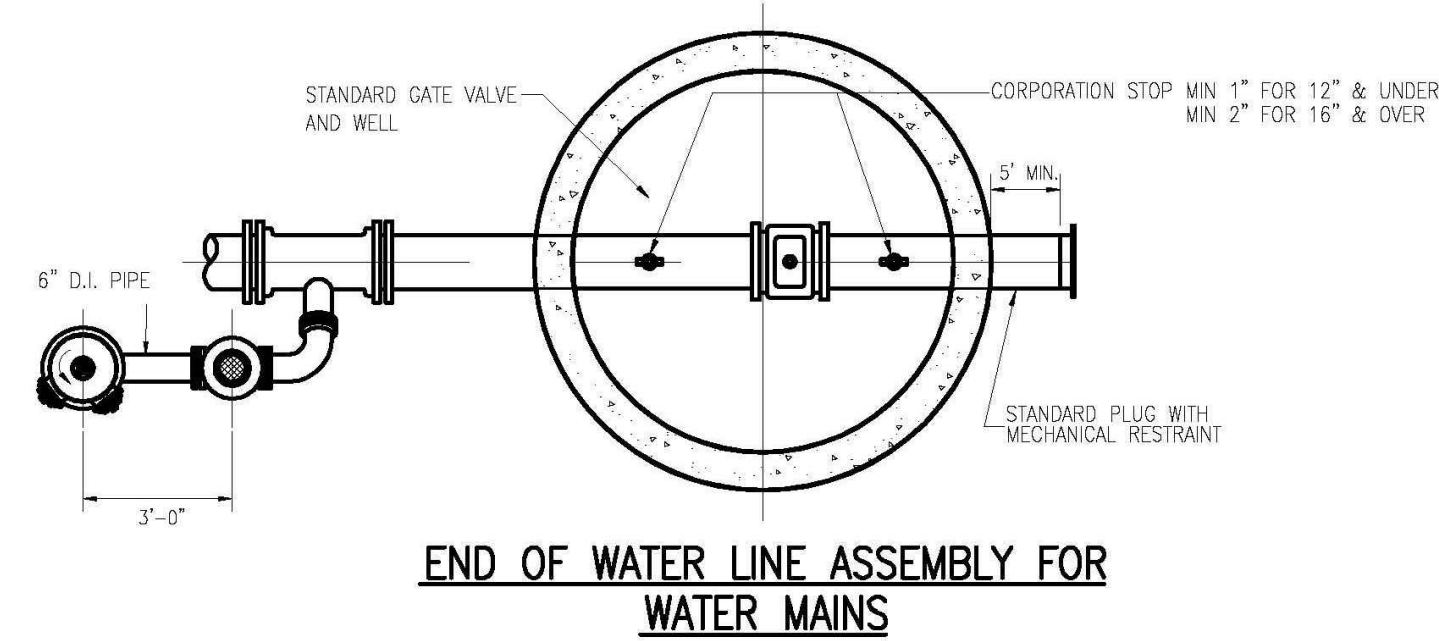
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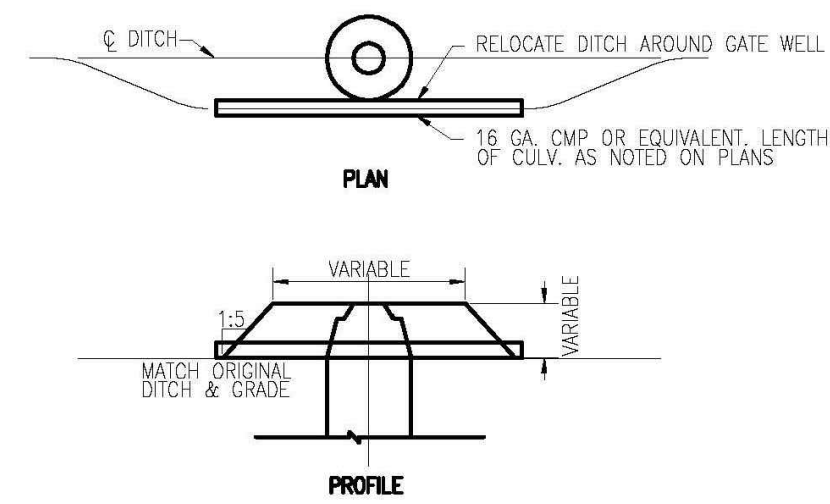
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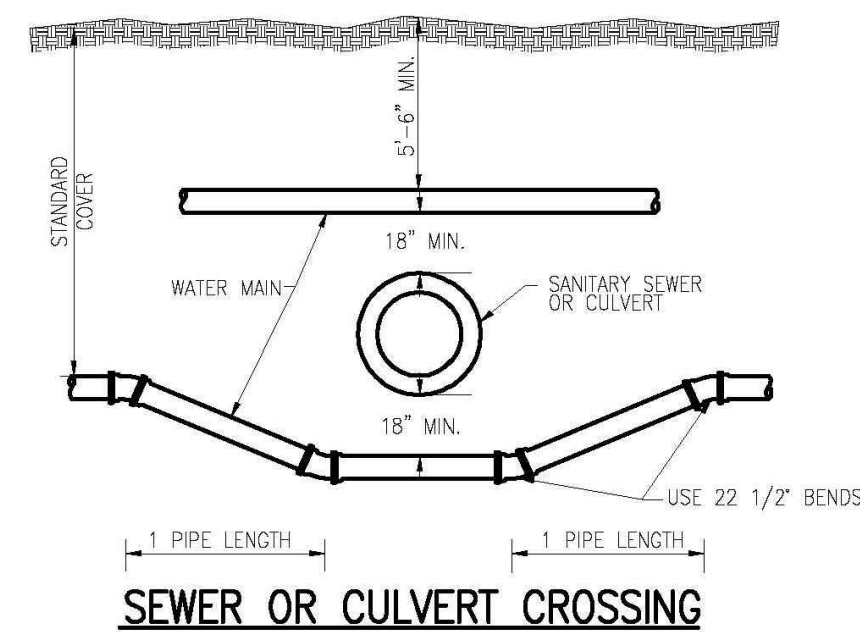




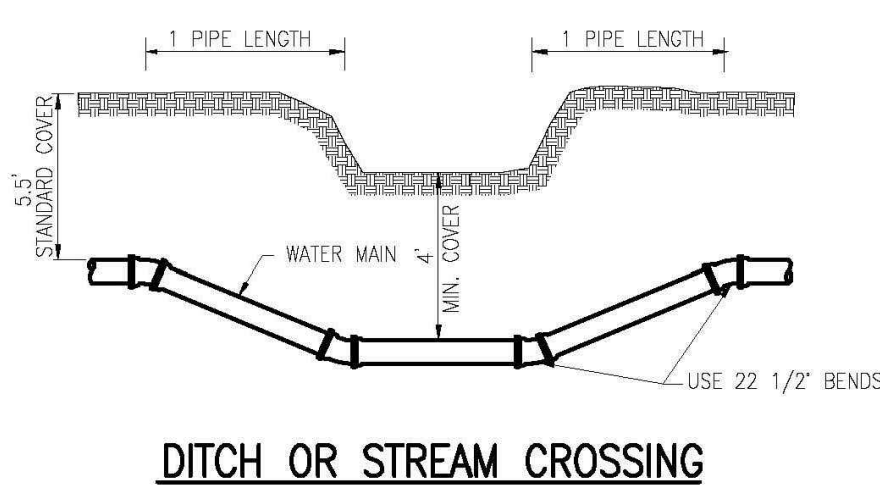
END OF WATER LINE ASSEMBLY FOR WATER MAINS



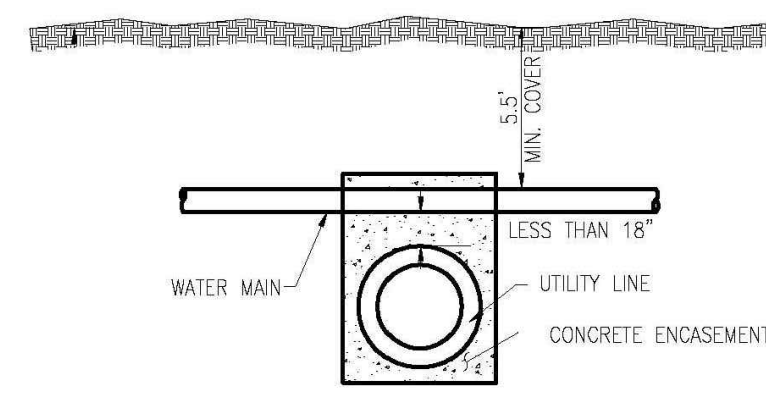
DITCH ENCLOSURE AT GATE WELL



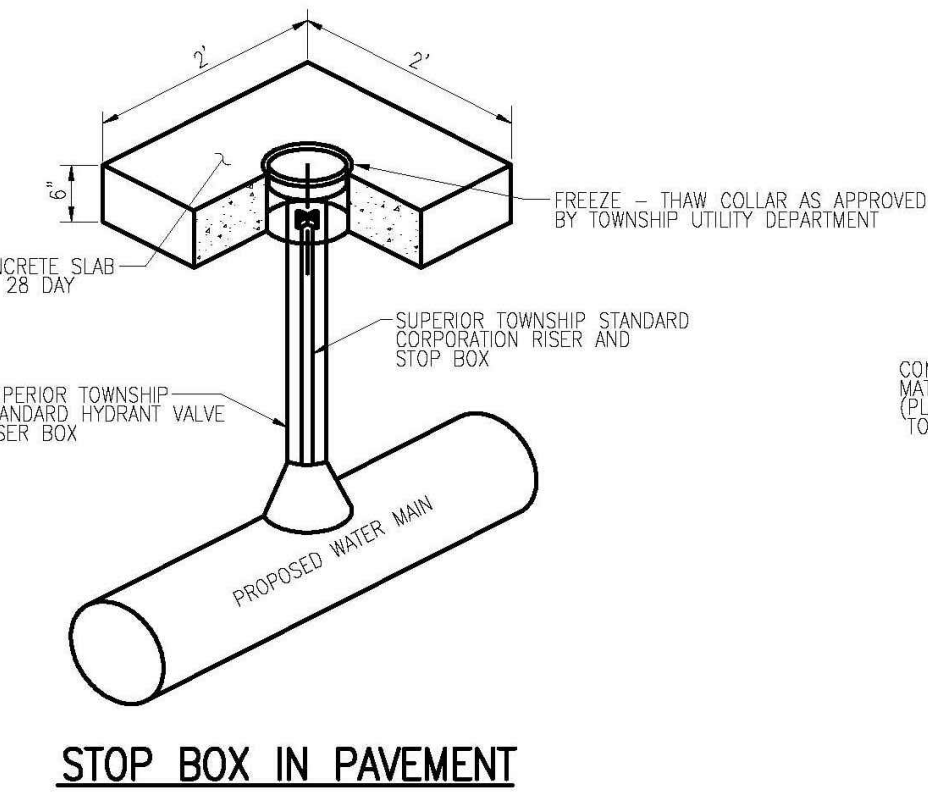
SEWER OR CULVERT CROSSING



DITCH OR STREAM CROSSING

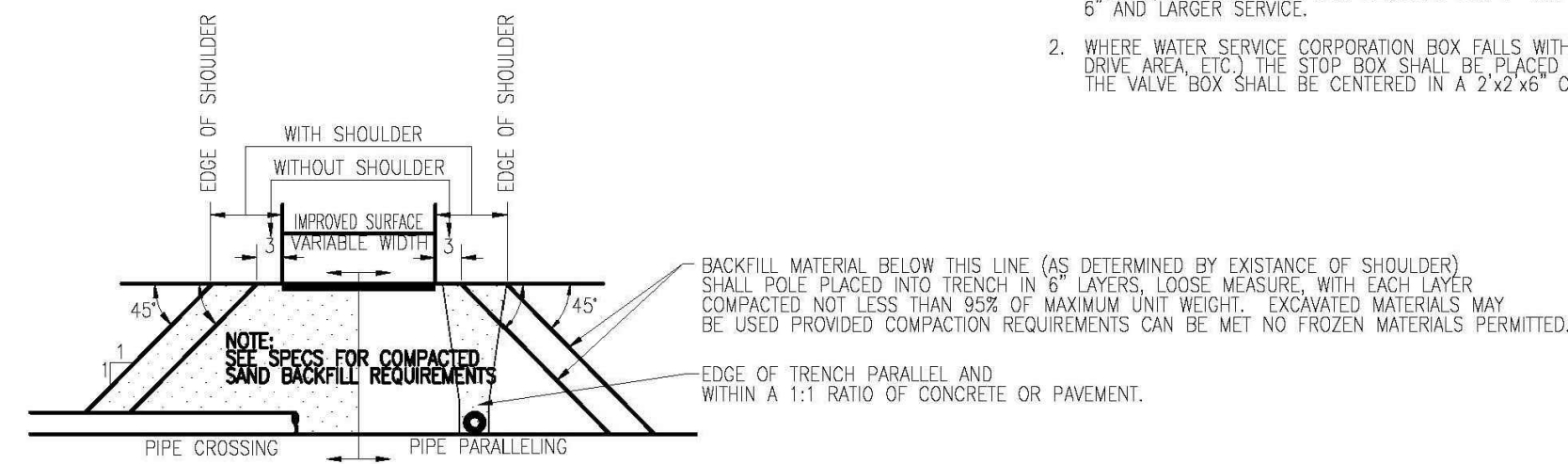


UTILITY CROSSING WITH LESS THAN 18\"/>



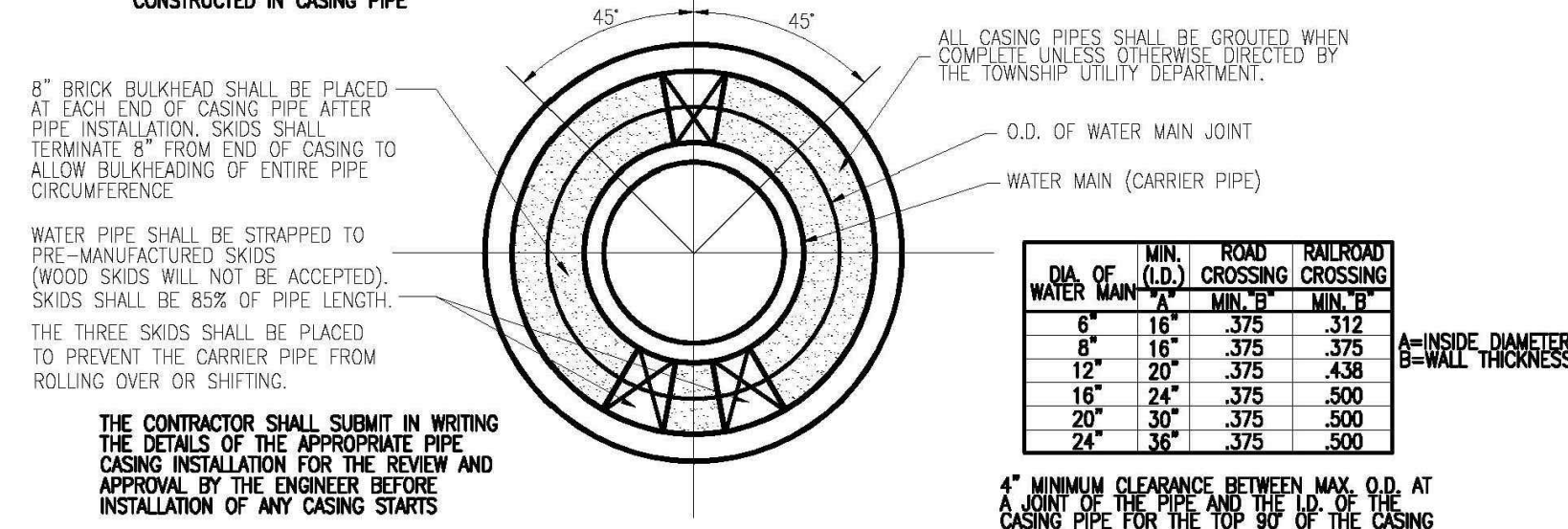
STOP BOX IN PAVEMENT

- WATER STOP BOX REQUIREMENTS**
- TWO HOLE ARCH PATTERN (FERE PATTERN) TYPE WITH 1\"/>
 - WHERE WATER SERVICE CORPORATION BOX FALLS WITHIN A PAVED AREA (PARKING LOT, SERVICE DRIVE AREA, ETC.) THE STOP BOX SHALL BE PLACED IN A STANDARD HYDRANT VALVE BOX. THE VALVE BOX SHALL BE CENTERED IN A 2'x2' CONCRETE SLAB.



BACKFILL IN THE AREA OF STREETS, ALLEYS, SIDEWALKS, DRIVES & PARKING LOTS

DETAILS ARE TYPICAL FOR WATER PIPE CONSTRUCTED IN CASING PIPE



PIPE BARREL SUPPORT FOR WATER MAIN CONSTRUCTED IN CASING PIPE

ALL CASING PIPES SHALL BE GROUDED WHEN COMPLETE UNLESS OTHERWISE DIRECTED BY THE TOWNSHIP UTILITY DEPARTMENT.

8\"/>

WATER PIPE SHALL BE STRAPPED TO PRE-MANUFACTURED SKIDS (WOOD SKIDS WILL NOT BE ACCEPTED). SKIDS SHALL BE 85% OF PIPE LENGTH. THE THREE SKIDS SHALL BE PLACED TO PREVENT THE CARRIER PIPE FROM ROLLING OVER OR SHIFTING.

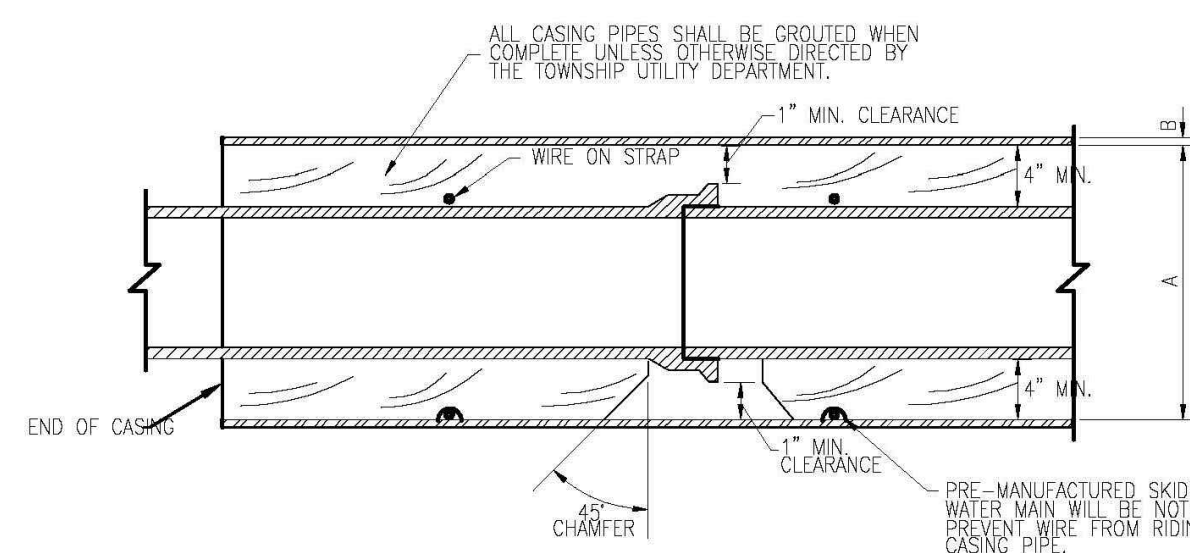
THE CONTRACTOR SHALL SUBMIT IN WRITING THE DETAILS OF THE APPROPRIATE PIPE CASING INSTALLATION FOR THE REVIEW AND APPROVAL BY THE ENGINEER BEFORE INSTALLATION OF ANY CASING STARTS

4\"/>

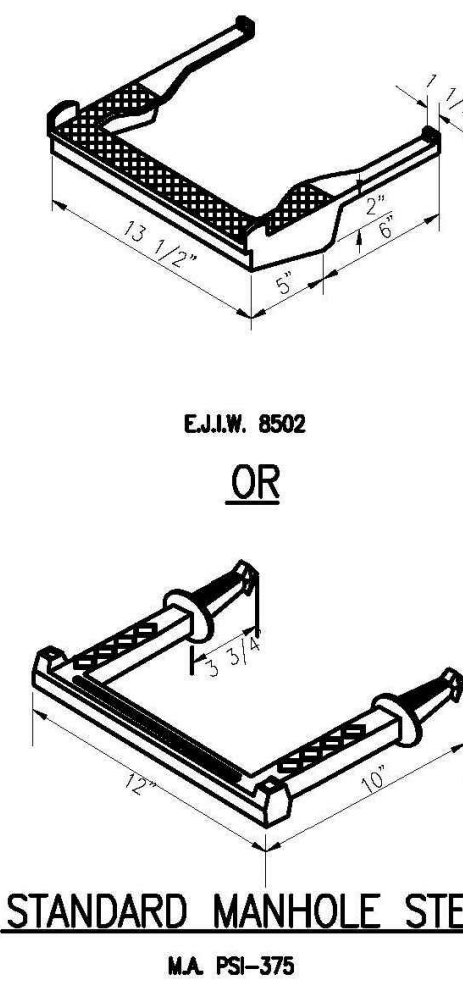
CASING SHALL BE SPIRAL REINFORCED STEEL PIPE A.S.T.M. A-252, GR. 2

UNLESS OTHERWISE SPECIFIED, MINIMUM CASING PIPE SHALL BE ASTM A-138 GRADE B WALL THICKNESS AS FOLLOWS:

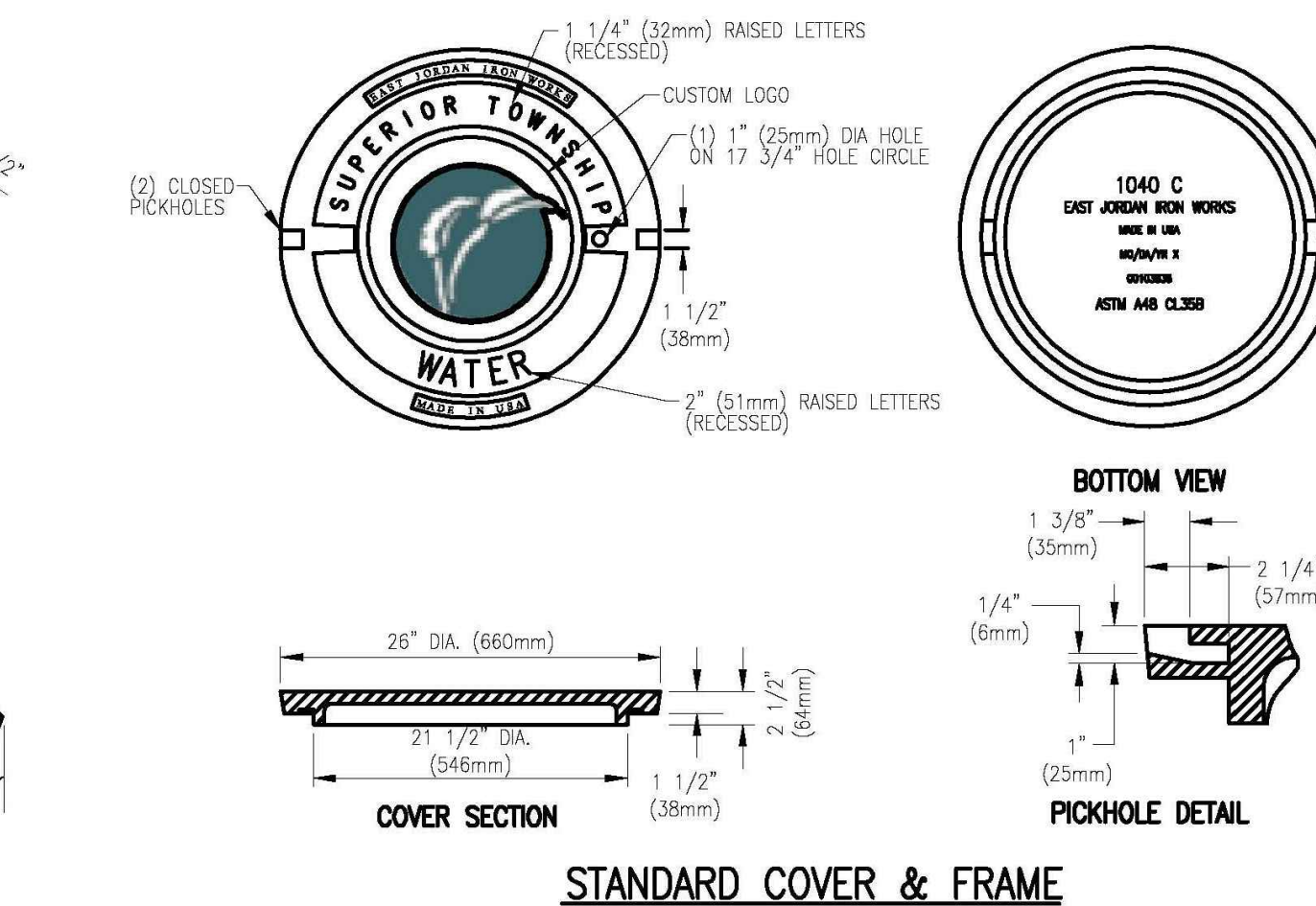
DIA. OF WATER MAIN - \"A\"	MIN. B\"/>
8\"/>	
10\"/>	
12\"/>	
16\"/>	
20\"/>	
24\"/>	



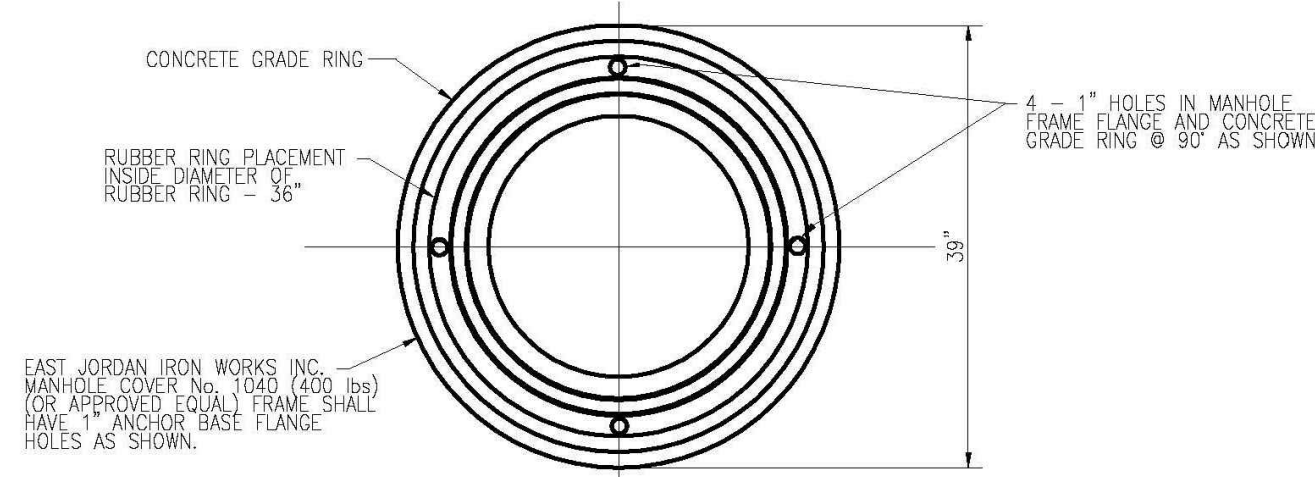
STANDARD CASING SECTION



STANDARD MANHOLE STEP



STANDARD COVER & FRAME



CAST IRON GATE WELL COVER AND GRADE RING



WWW.OHM-ADVISORS.COM

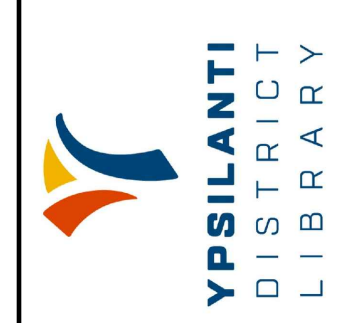
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PROJ/MGR		PROJ/MGR	
SECTION		SECTION	
TOWN		TOWN	
COUNTY	WASHINGTON	COUNTY	WASHINGTON
CITY/TOWNSHIP	CHARTER TOWNSHIP OF SUPERIOR	CITY/TOWNSHIP	CHARTER TOWNSHIP OF SUPERIOR
SCALE	N/A	SCALE	N/A
H. NTS	000-00-0000	H. NTS	000-00-0000
REF. DATA	N/A	REF. DATA	N/A

CHARTER TOWNSHIP OF SUPERIOR
STANDARD WATER MAIN DETAILS

SHEET 2 OF 2

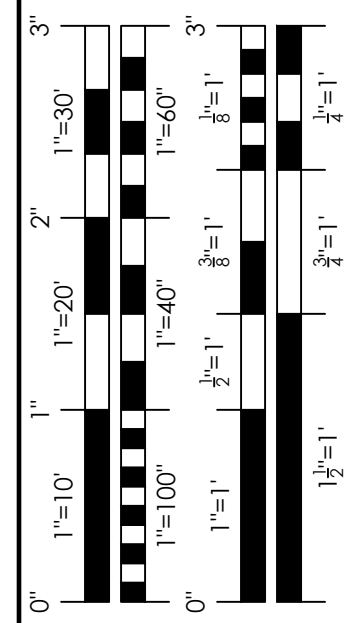


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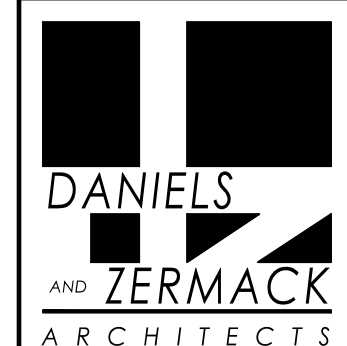
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FINAL SITE PLAN APPROVAL & W/C/RIC REVIEW	25 NOV 2020

JOB	2017-55
DATE	25 SEPT 2020
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CHECKED	BB

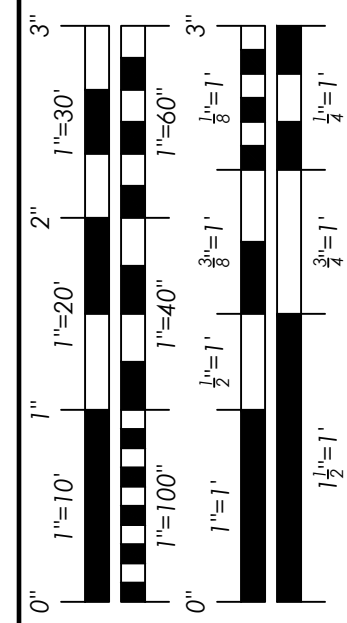
DETAIL SYMBOL

DETAIL NUMBER	
REFERENCE SHEET	

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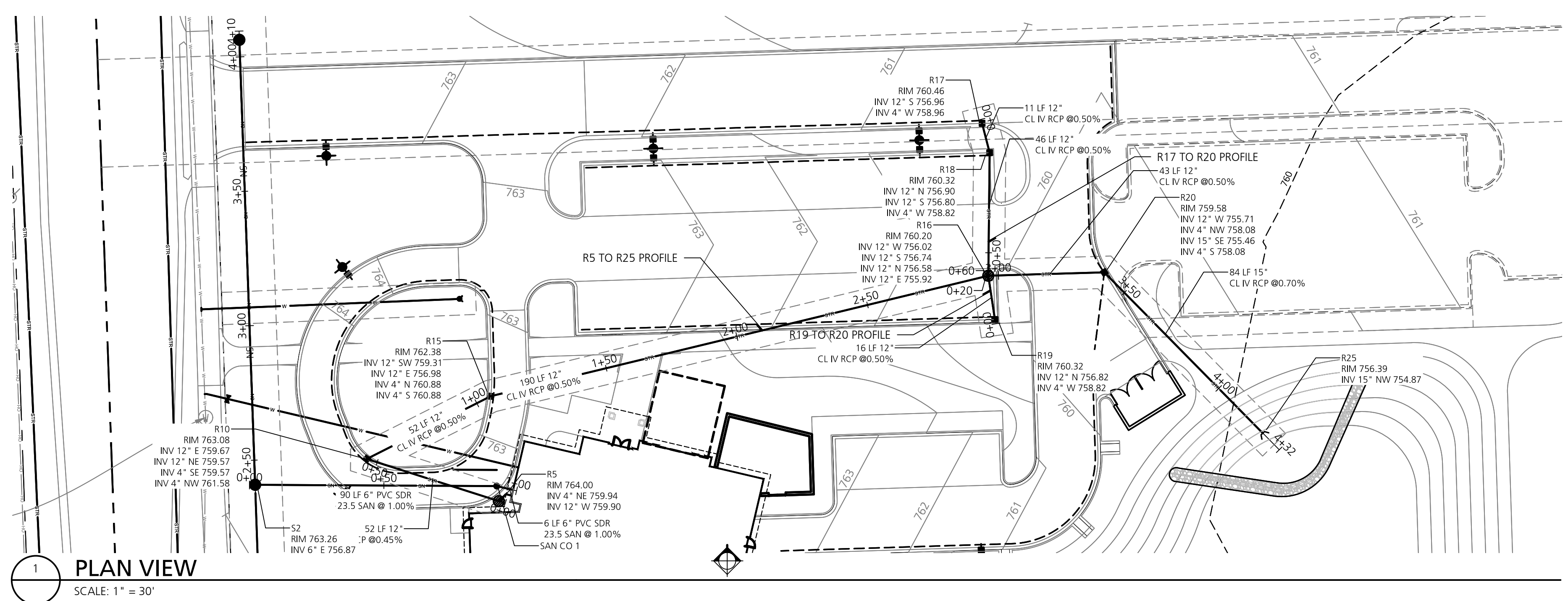
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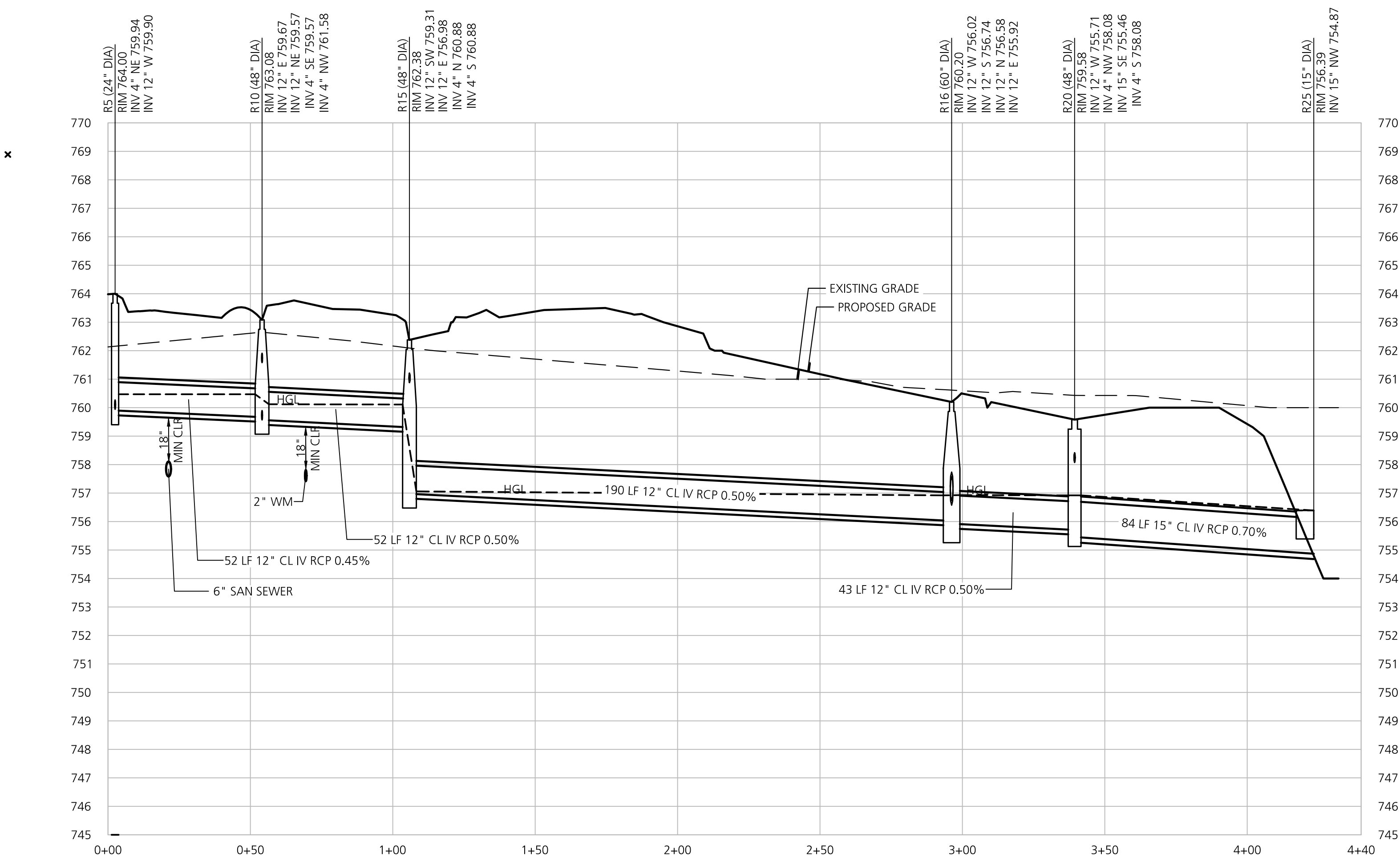
DETAIL SYMBOL
DETAIL NUMBER
REFERENCE SHEET

CAUTION:
FIELD VERIFY ALL UTILITIES
PRIOR TO EXCAVATION.

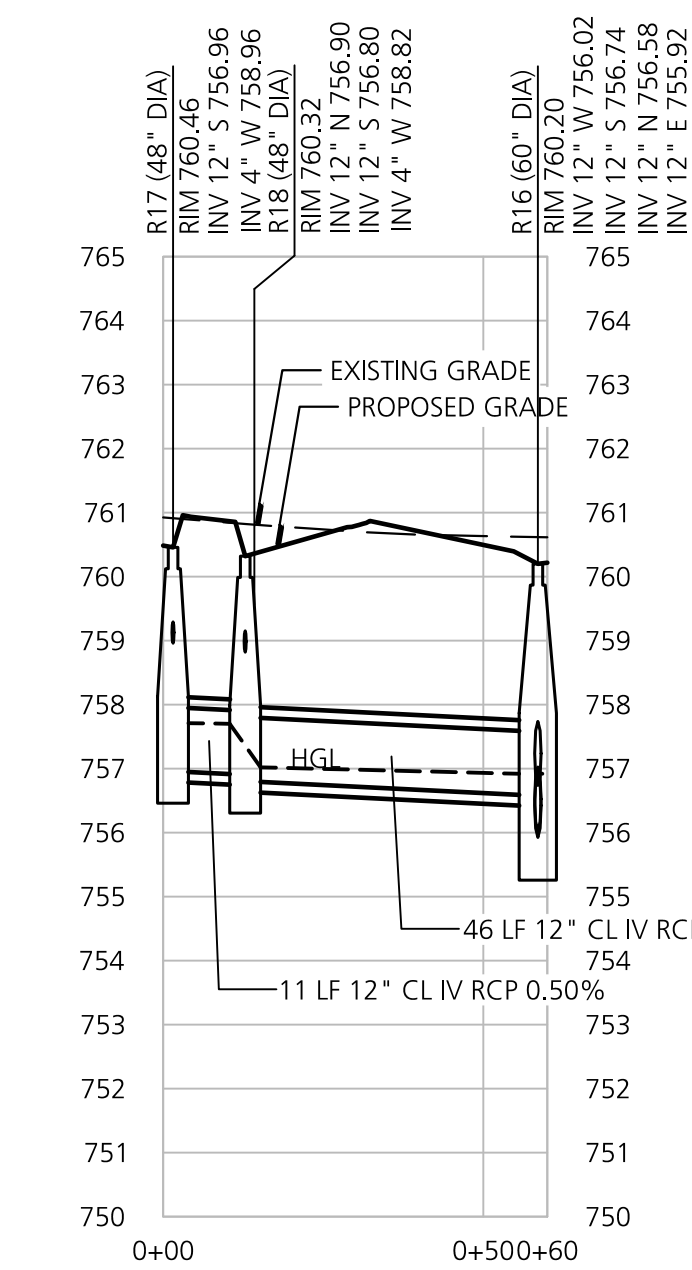
C8.0
YDL SUPERIOR



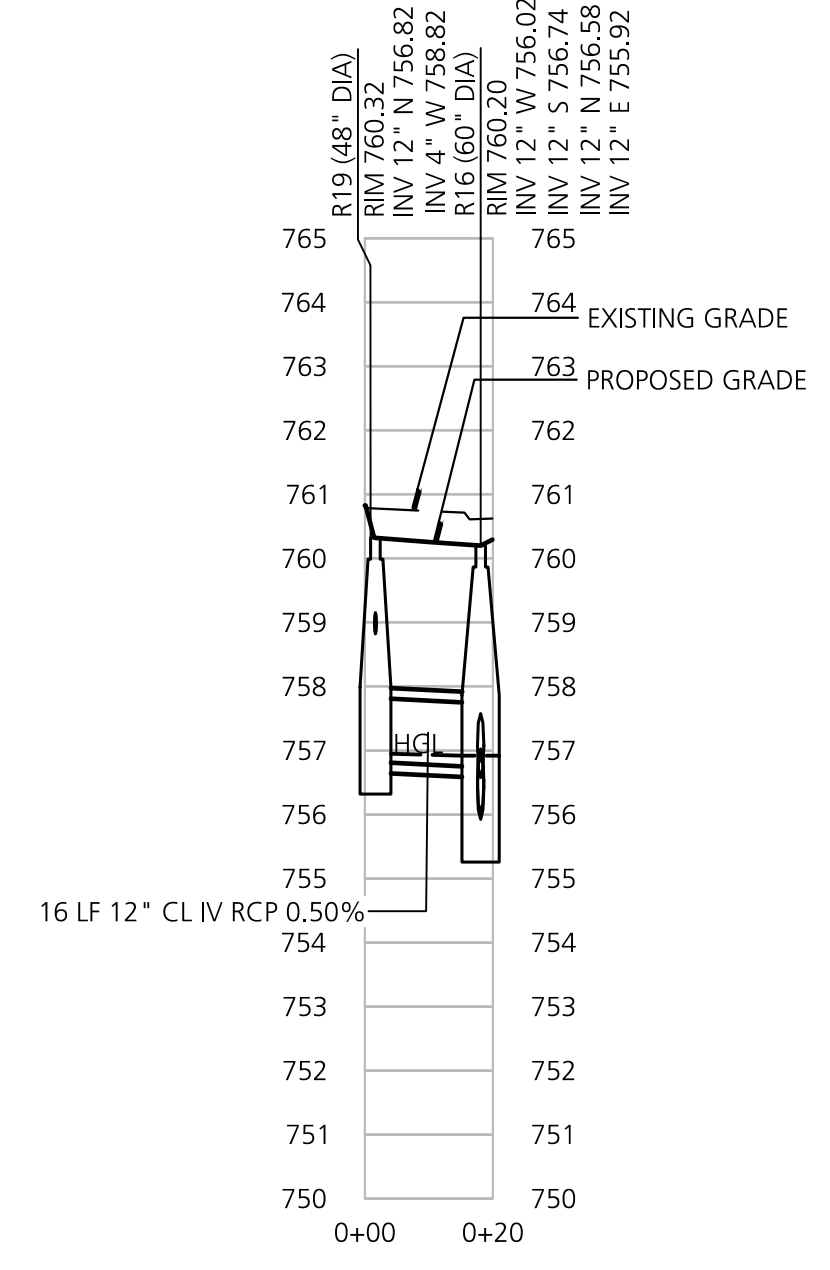
1 PLAN VIEW
SCALE: 1" = 30'



2 R5 TO R25 PROFILE 0+00 TO 4+32
SCALE: HORIZONTAL- 1" = 30' VERT- 1" = 3'

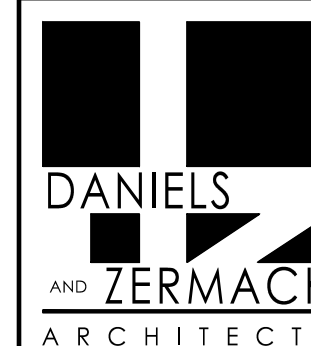


3 R17 TO R16 PROFILE 0+00 TO 0+60
SCALE: HORIZONTAL- 1" = 30' VERT- 1" = 3'

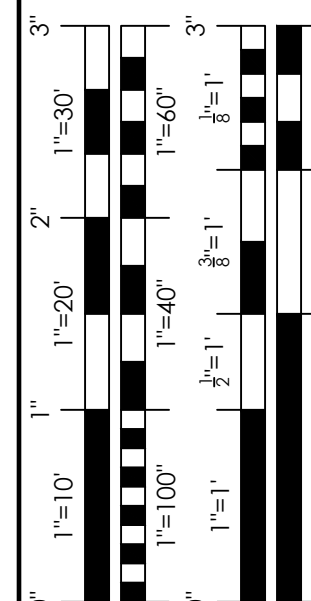


4 R19 TO R16 PROFILE 0+00 TO 0+20
SCALE: HORIZONTAL- 1" = 30' VERT- 1" = 3'





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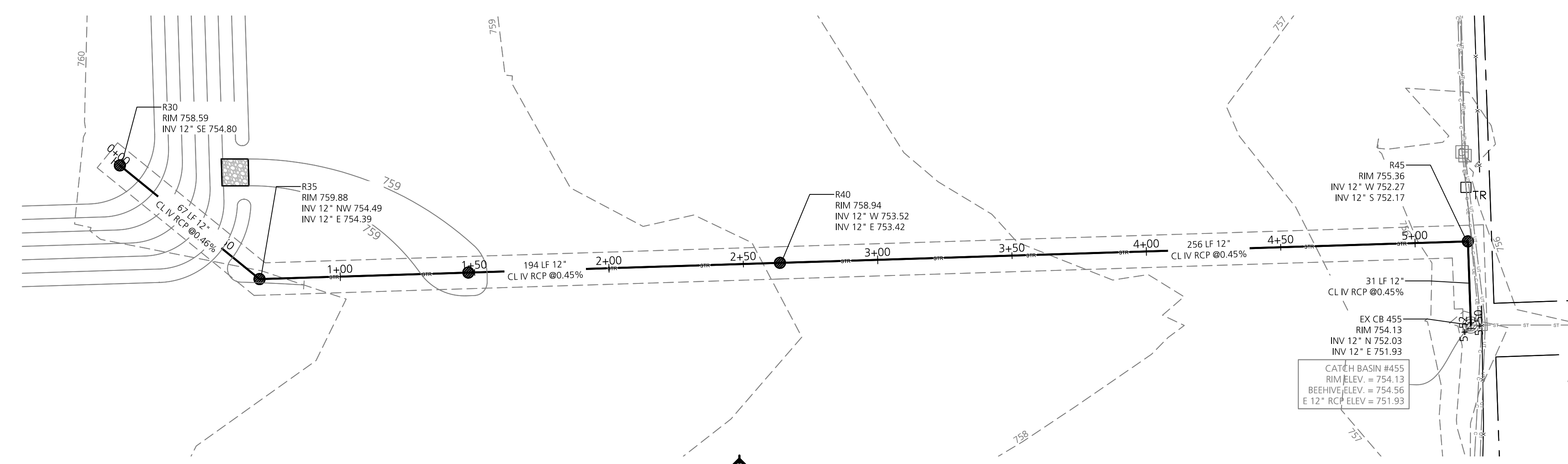
JOB	2017-55
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DRAWN	BB
CHECKED	BB

DETAIL SYMBOL	
DETAIL NUMBER	
REFERENCE SHEET	

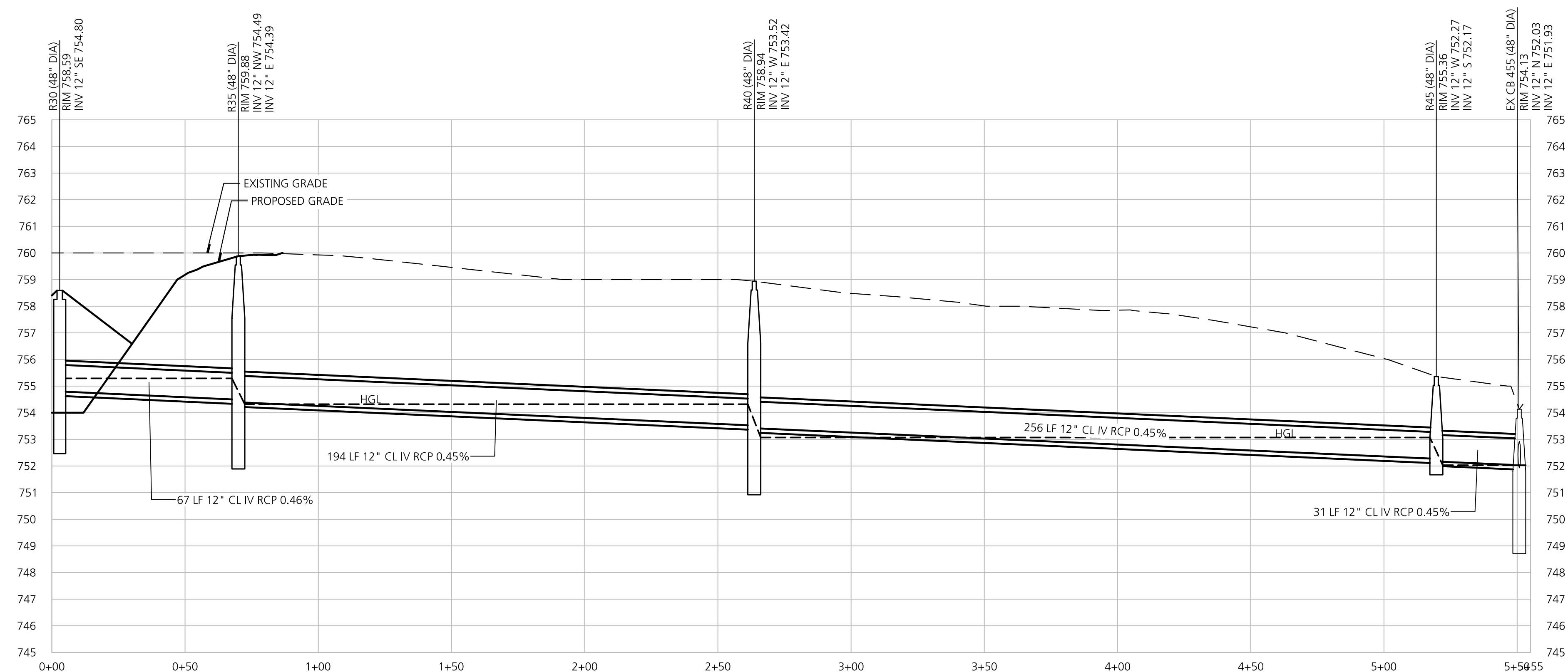
DETAIL SYMBOL	
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REFERENCE SHEET	

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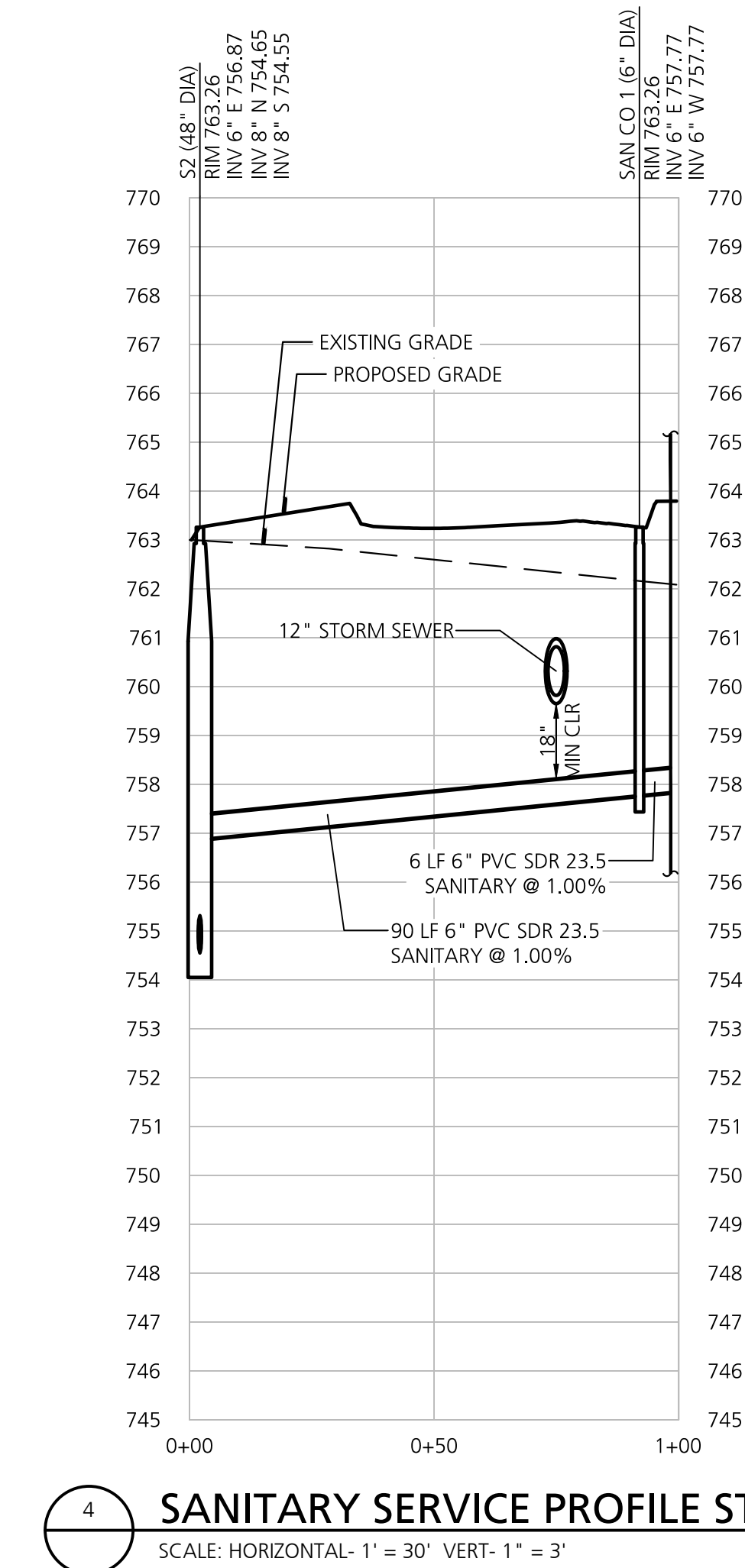
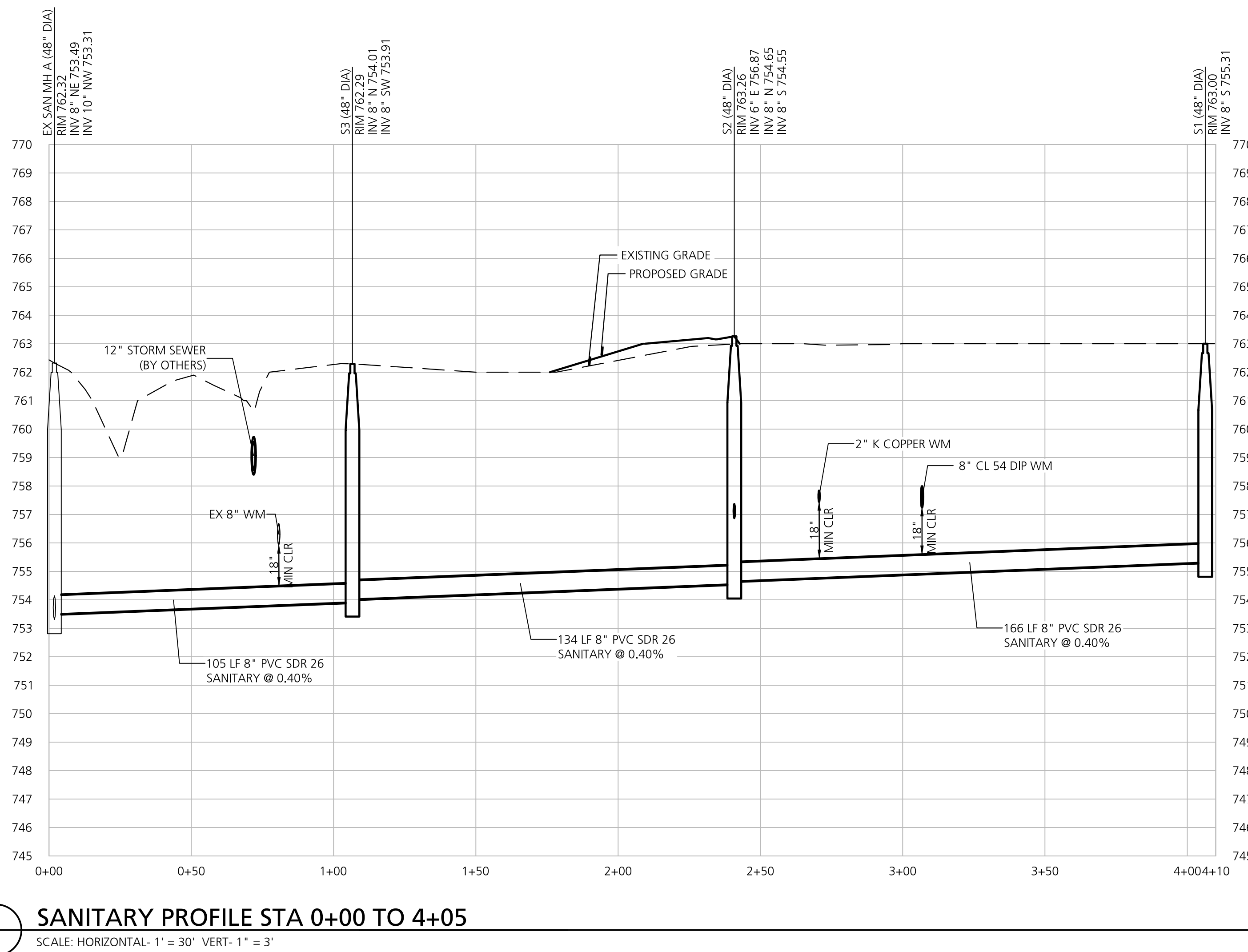
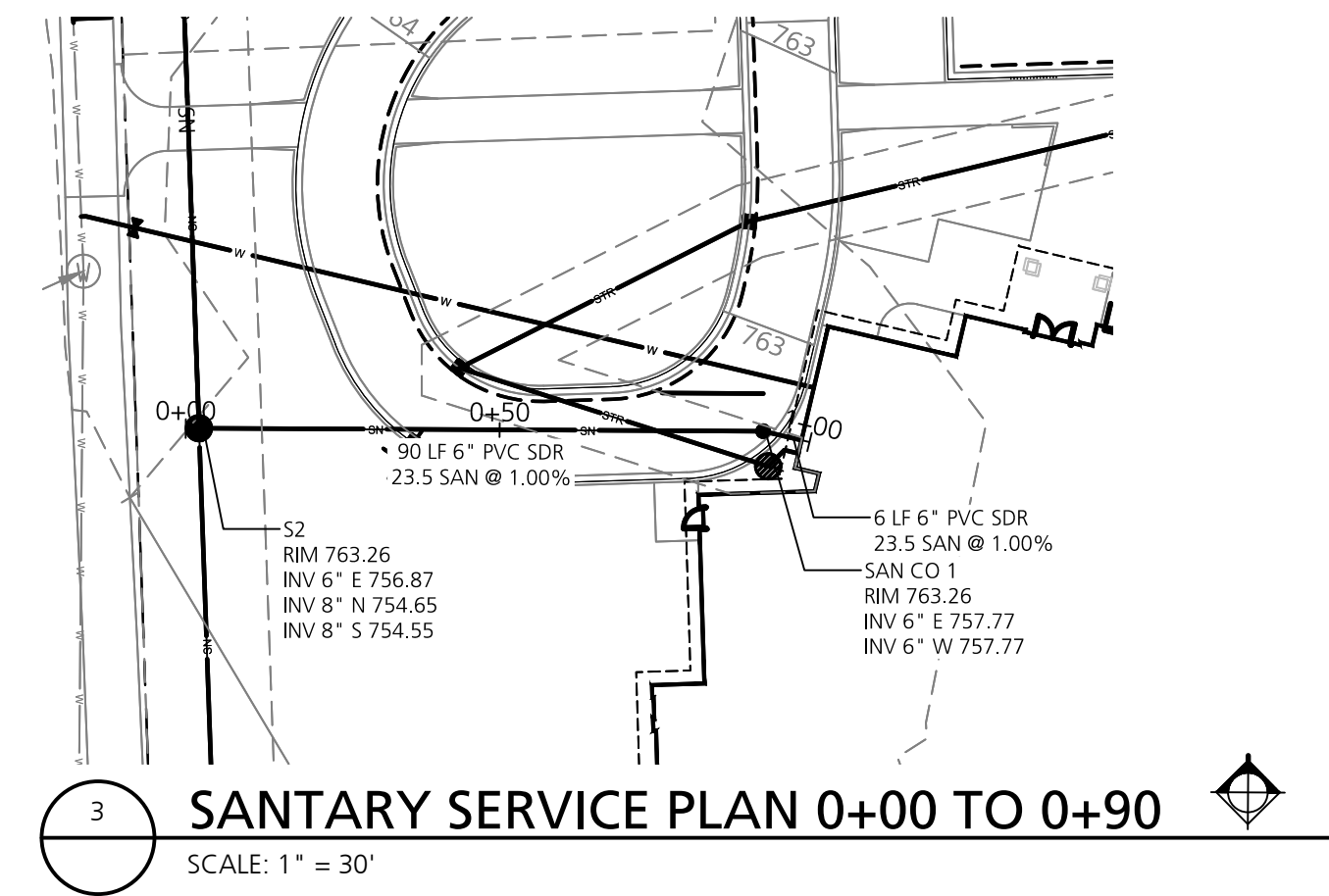
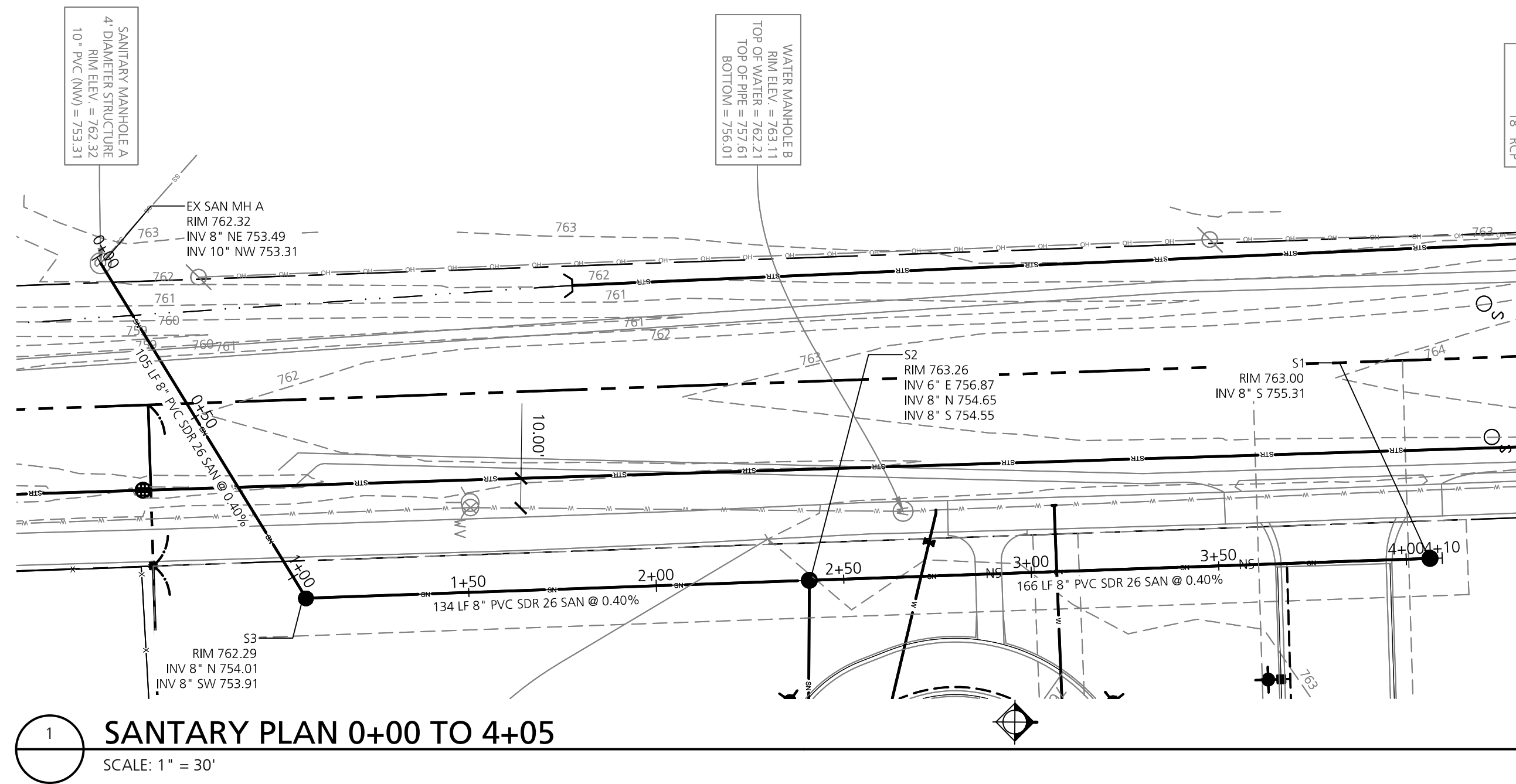


1 R30 TO EX R445 PLAN 0+00 TO 5+51
SCALE: 1" = 30'



2 R30 TO EX R445 PROFILE STA 0+00 TO 5+51
SCALE: HORIZONTAL- 1" = 30' VERT- 1" = 3'

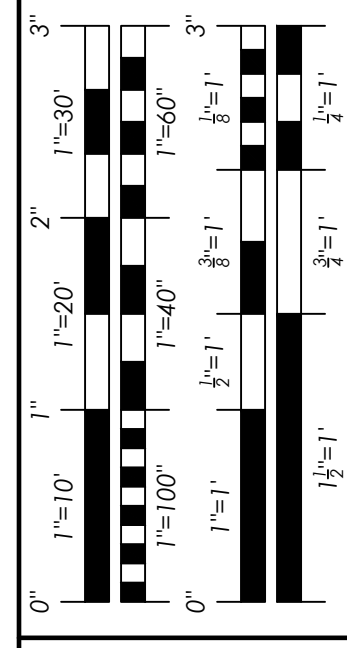




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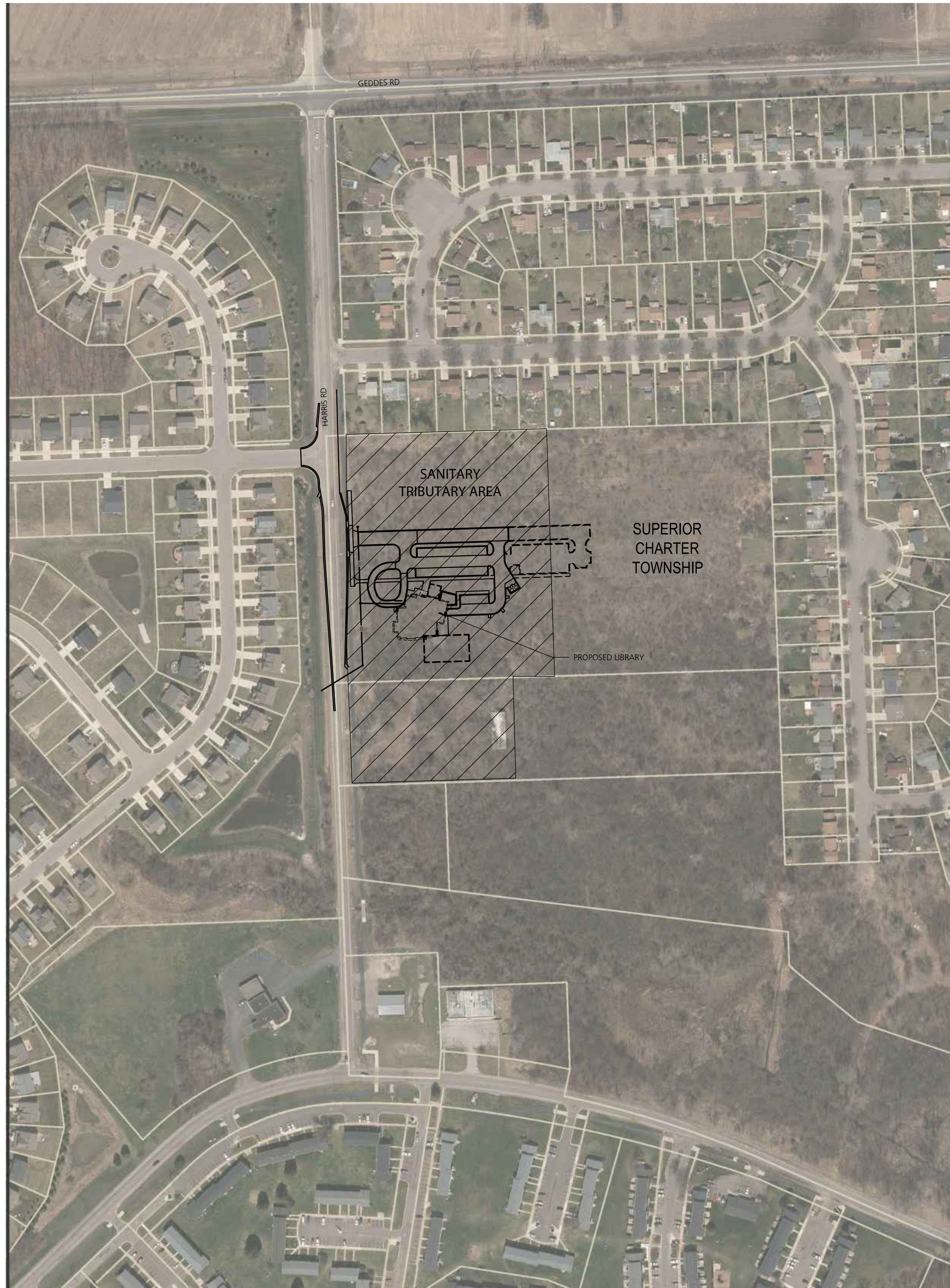
JOB	2017-55
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DETAIL SYMBOL

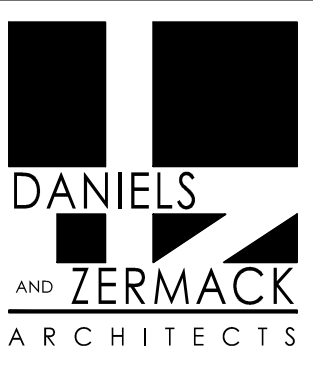
DETAIL NUMBER	
REFERENCE SHEET	

CAUTION:
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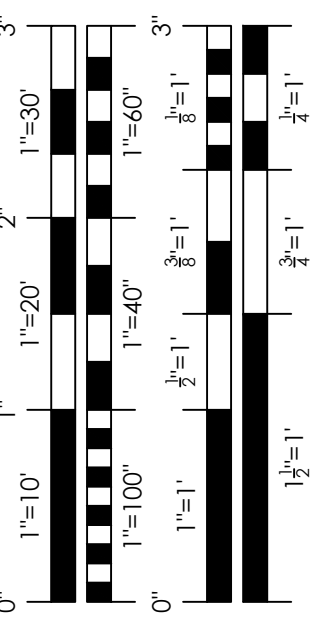
C8.2
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DRAWN	BB
CHECKED	BB

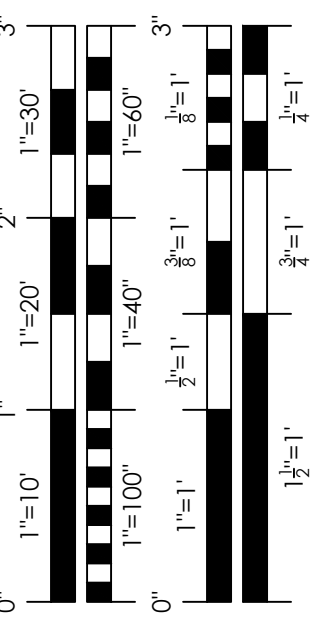
DETAIL SYMBOL	DETAIL NUMBER
	REFERENCE SHEET

C8.3
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ULTIMATE SANITARY SERVICE AREA



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DATE 25 SEPT 2020

DRAWN BB

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DETAIL SYMBOL

DETAIL NUMBER	REFERENCE SHEET
L1.0	YDL SUPERIOR

LANDSCAPE NOTES

- TOPSOIL (4") AND SEED ALL DISTURBED TURF AREAS.
- ALL IMPORTED TOPSOIL SHALL BE SCREENED AND BE APPROVED BY LANDSCAPE ARCHITECT/ENGINEER PRIOR TO INSTALLATION. PROVIDE CERTIFICATION FOR ALL IMPORTED TOPSOIL.
- MULCH ALL LANDSCAPE BEDS PER SPECIFICATIONS.

IRRIGATION NOTES

- CONTRACTOR SHALL PROVIDE WATERING OR TEMPORARY IRRIGATION AS REQUIRED FOR SUCCESSFUL ESTABLISHMENT OF PLANTINGS.

LANDSCAPE LEGEND

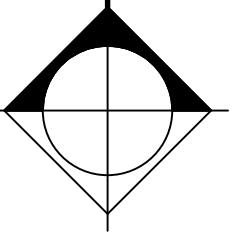
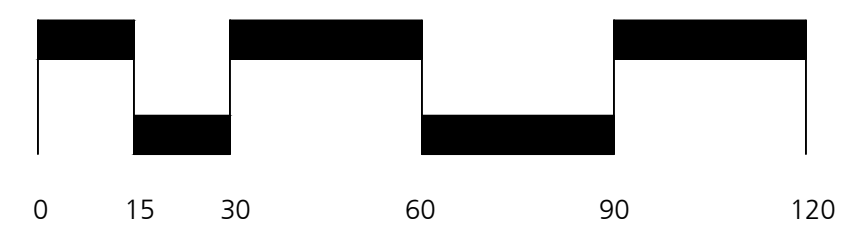
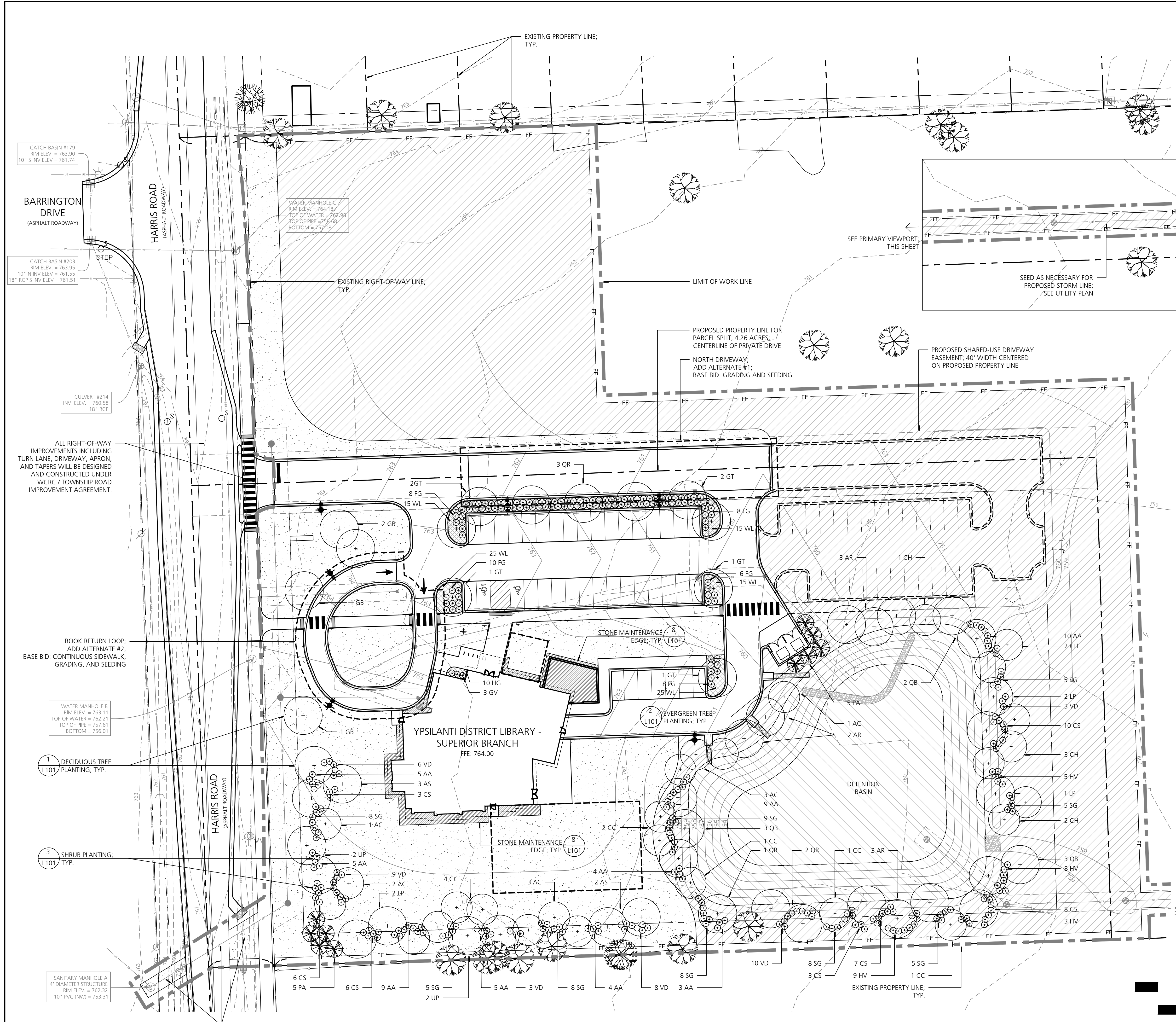
	PROPERTY LINE
	RIGHT-OF-WAY / SETBACK LINE
	LIMIT OF WORK LINE
	FILTER FABRIC FENCE
	LAWN RESTORATION
	STORMWATER SEED MIX
	LOW-PROFILE PRAIRIE SEED MIX
	PLANTING BED WITH SHREDDED BARK MULCH
	STONE MAINTENANCE EDGE
	PROPOSED CANOPY TREE
	PROPOSED ORNAMENTAL TREE
	PROPOSED EVERGREEN TREE
	PROPOSED SHRUB
	PROPOSED SITE LIGHTING; SEE ELECTRICAL PLANS

LANDSCAPE CALCULATIONS

SOUTHWEST GREENBELT BUFFER -
 REQUIRED: 1 TREE AND 3 SHRUBS PER 15 LINEAR FEET
 386 LINEAR FEET = 26 TREES AND 78 SHRUBS
 PROVIDED: 26 TREES AND 90 SHRUBS

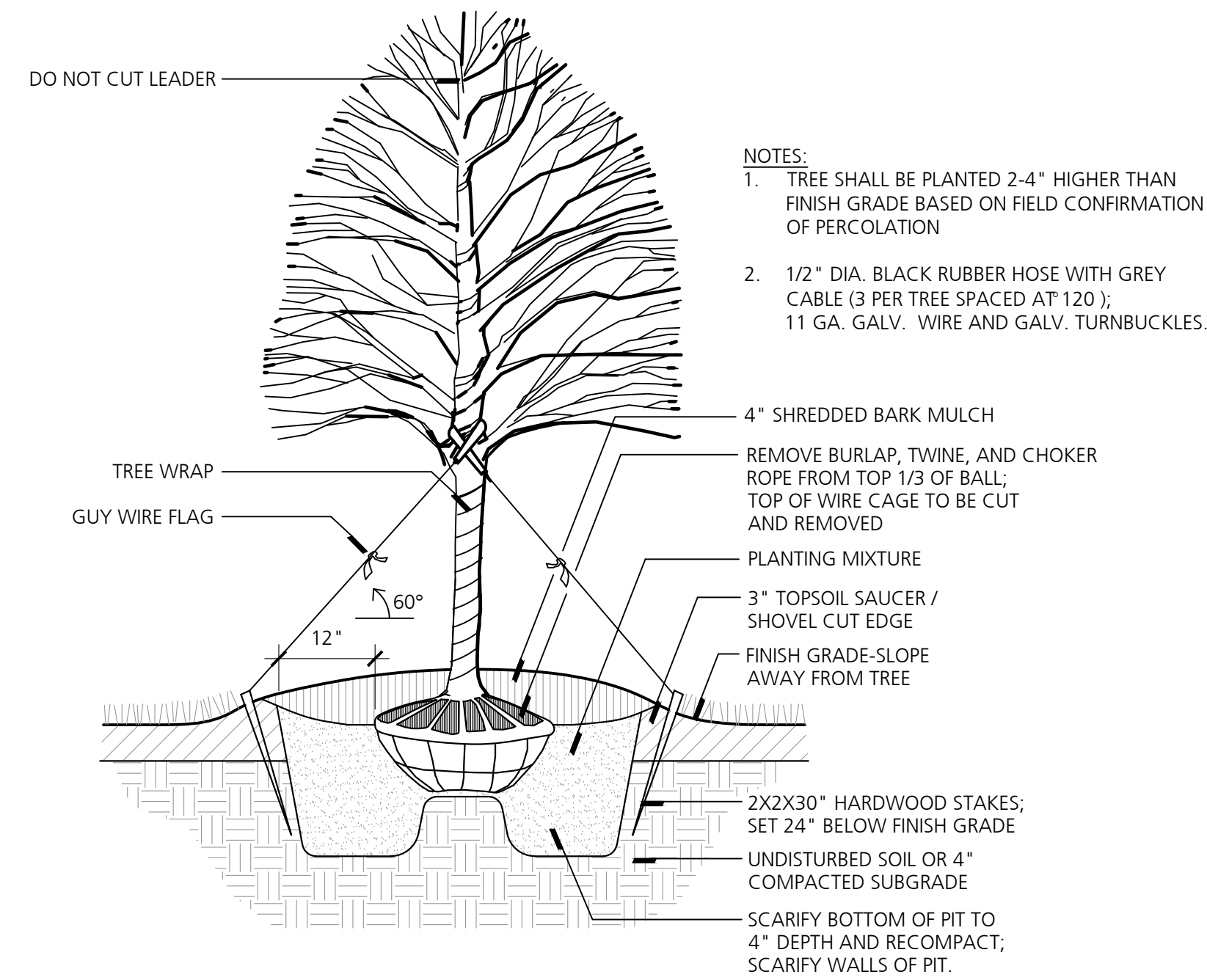
DETENTION BASIN GREENBELT BUFFER -
 REQUIRED: 1 TREE AND 3 SHRUBS PER 15 LINEAR FEET
 650 LINEAR FEET = 44 TREES AND 132 SHRUBS
 PROVIDED: 44 TREES AND 132 SHRUBS

TREE PRESERVATION REPLACEMENT TREES -
 REQUIRED: 7 TREES (REFER TO NOTES ON EXISTING CONDITIONS PLAN)
 GREENBELT BUFFER TREES ARE ALLOWED TO SATISFY 50% OF THE REQUIREMENT
 PROVIDED: 4 TREES + 3 GREENBELT BUFFER TREES

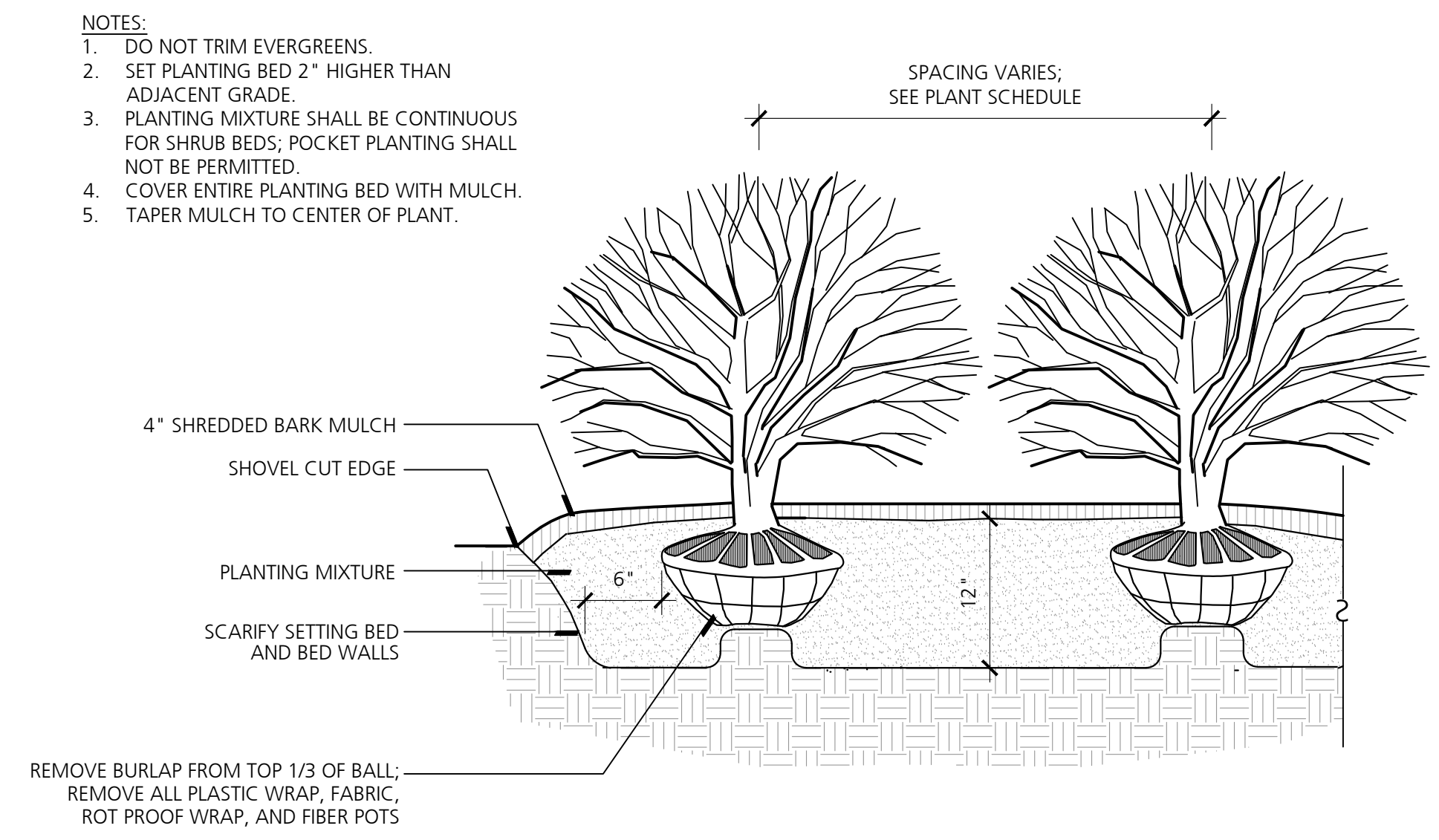


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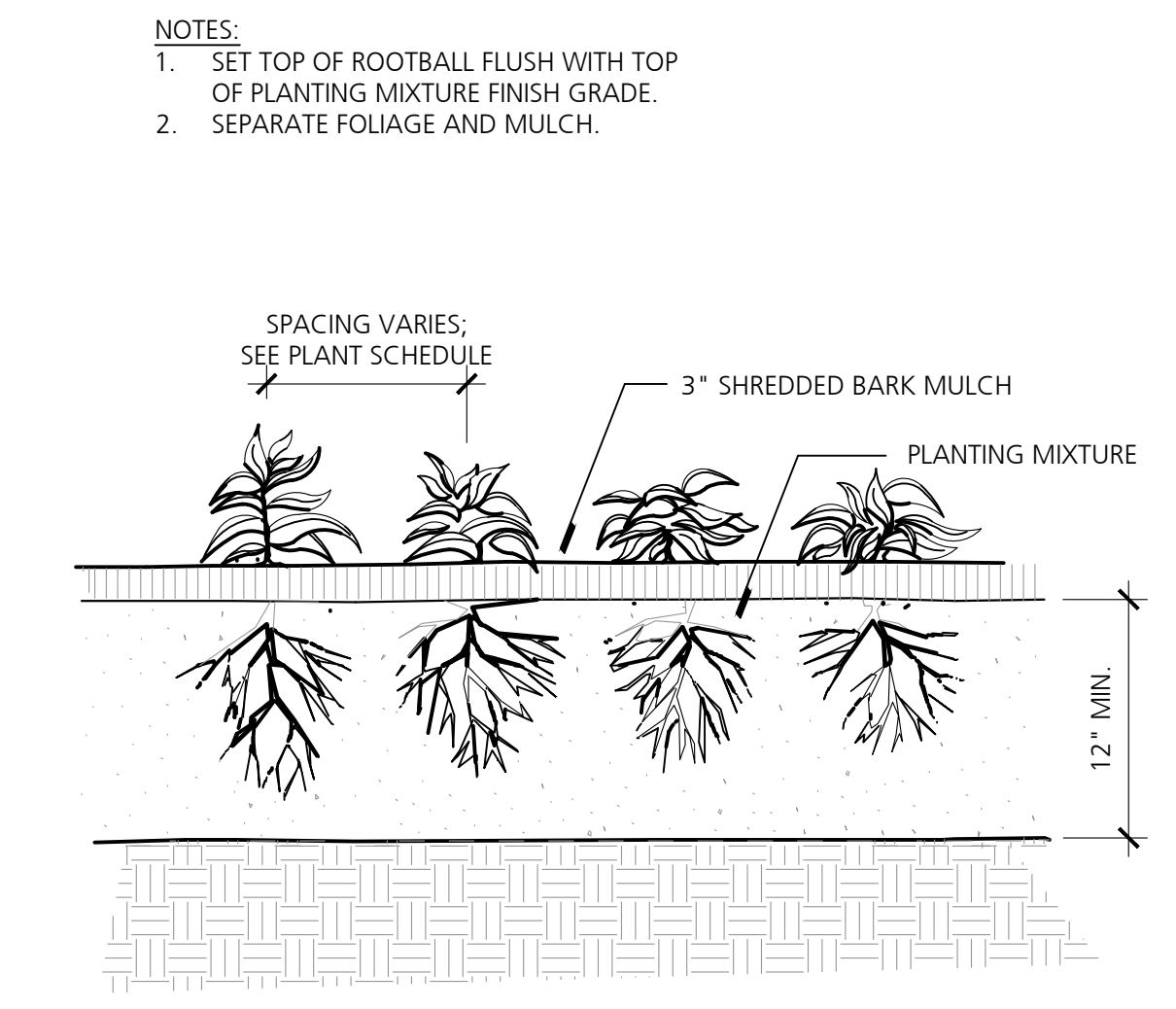
LANDSCAPE PLAN



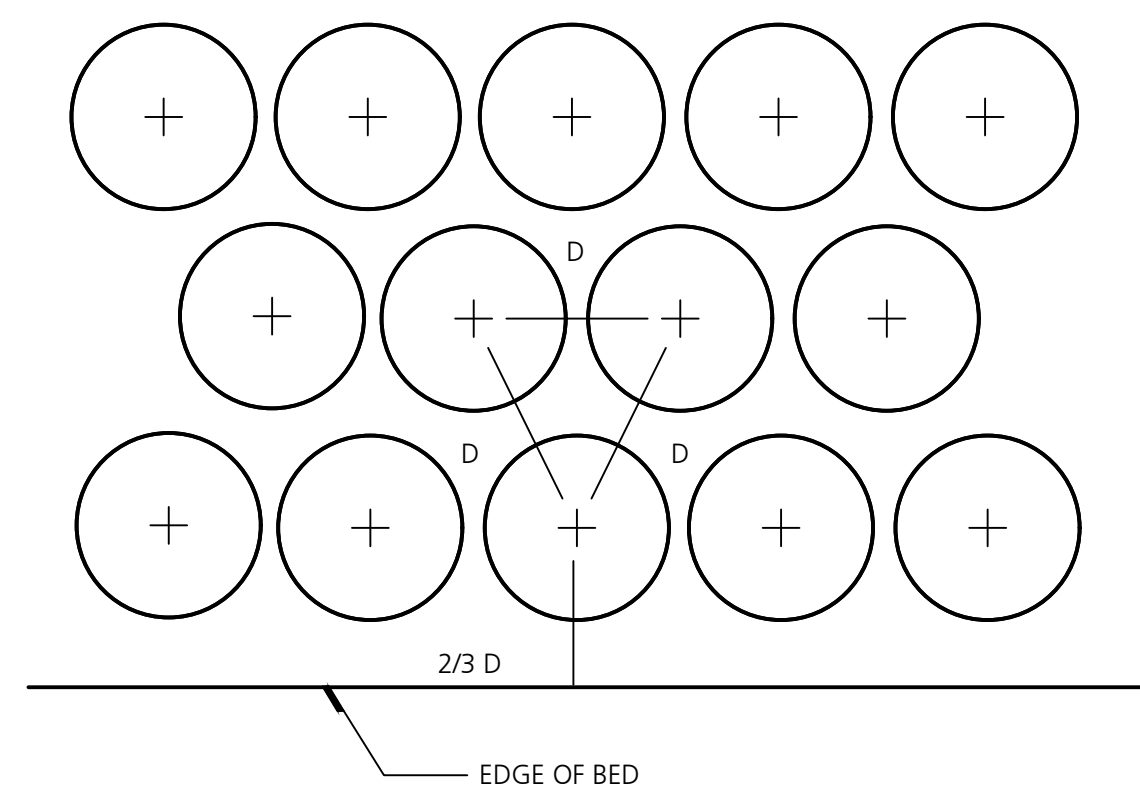
1 Deciduous Tree Planting
NO SCALE



2 Shrub Planting
NO SCALE

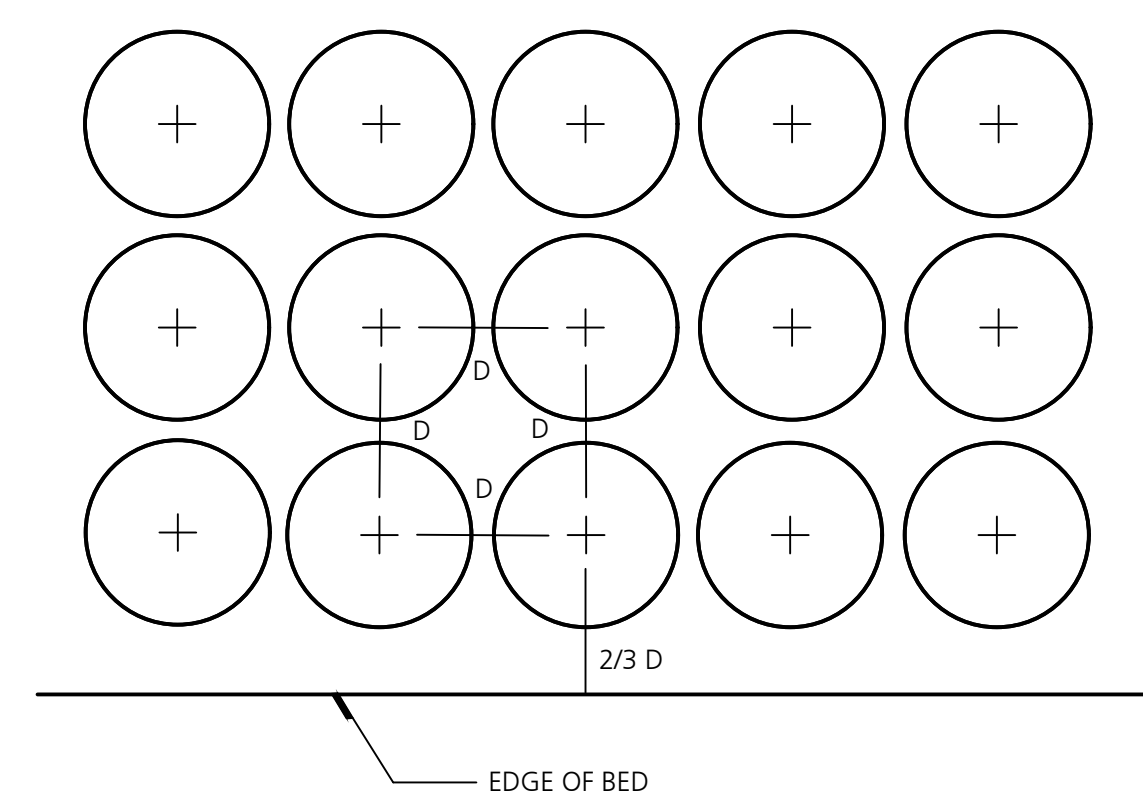


3 Perennial and Ornamental Grass Planting
NO SCALE



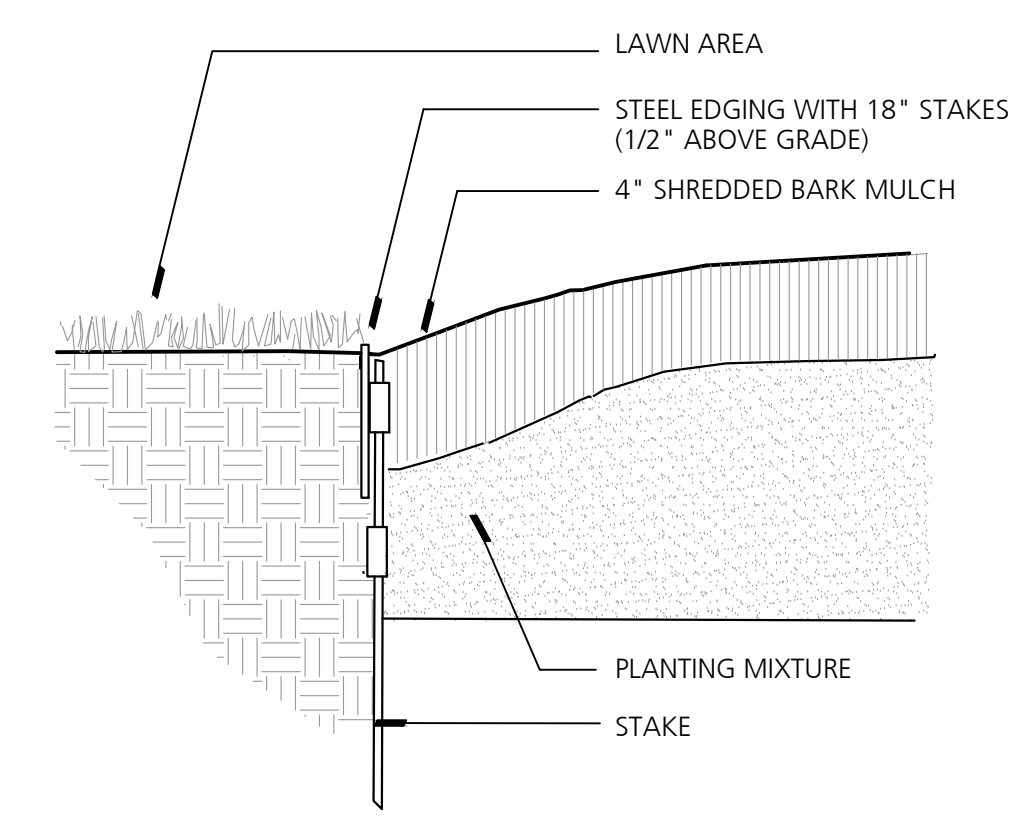
D = DIMENSION OF PLANT SPACING (SHRUB, GROUNDCOVER OR PERENNIAL) AS INDICATED ON PLANS AND PLANT LIST

4 Plant Spacing - Triangular
NO SCALE

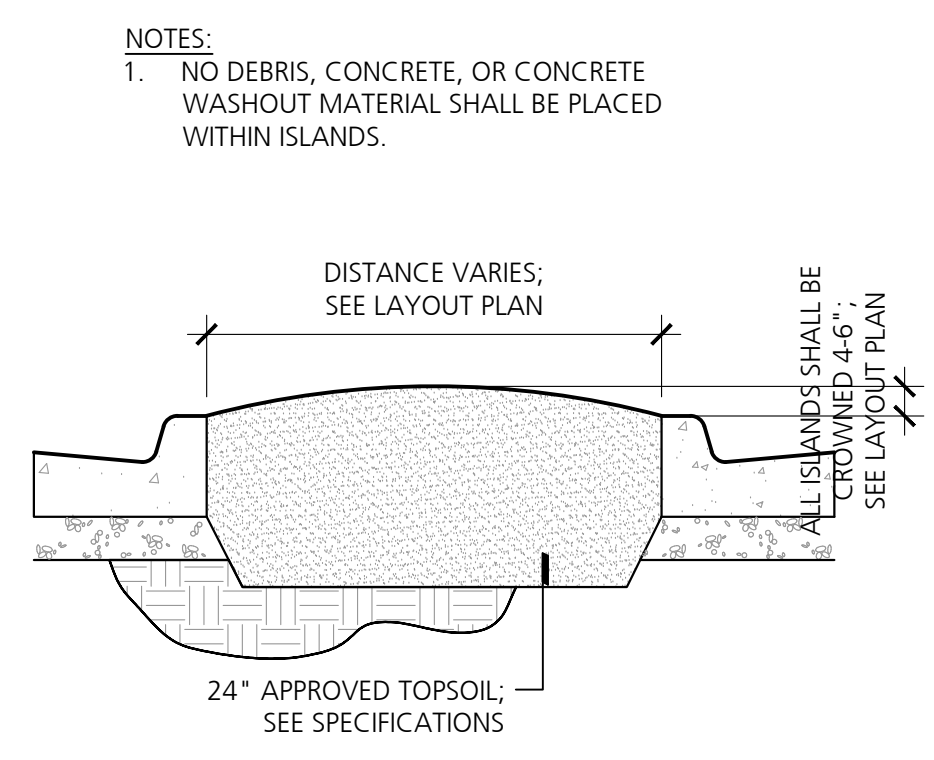


D = DIMENSION OF PLANT SPACING (SHRUB, GROUNDCOVER OR PERENNIAL) AS INDICATED ON PLANS AND PLANT LIST

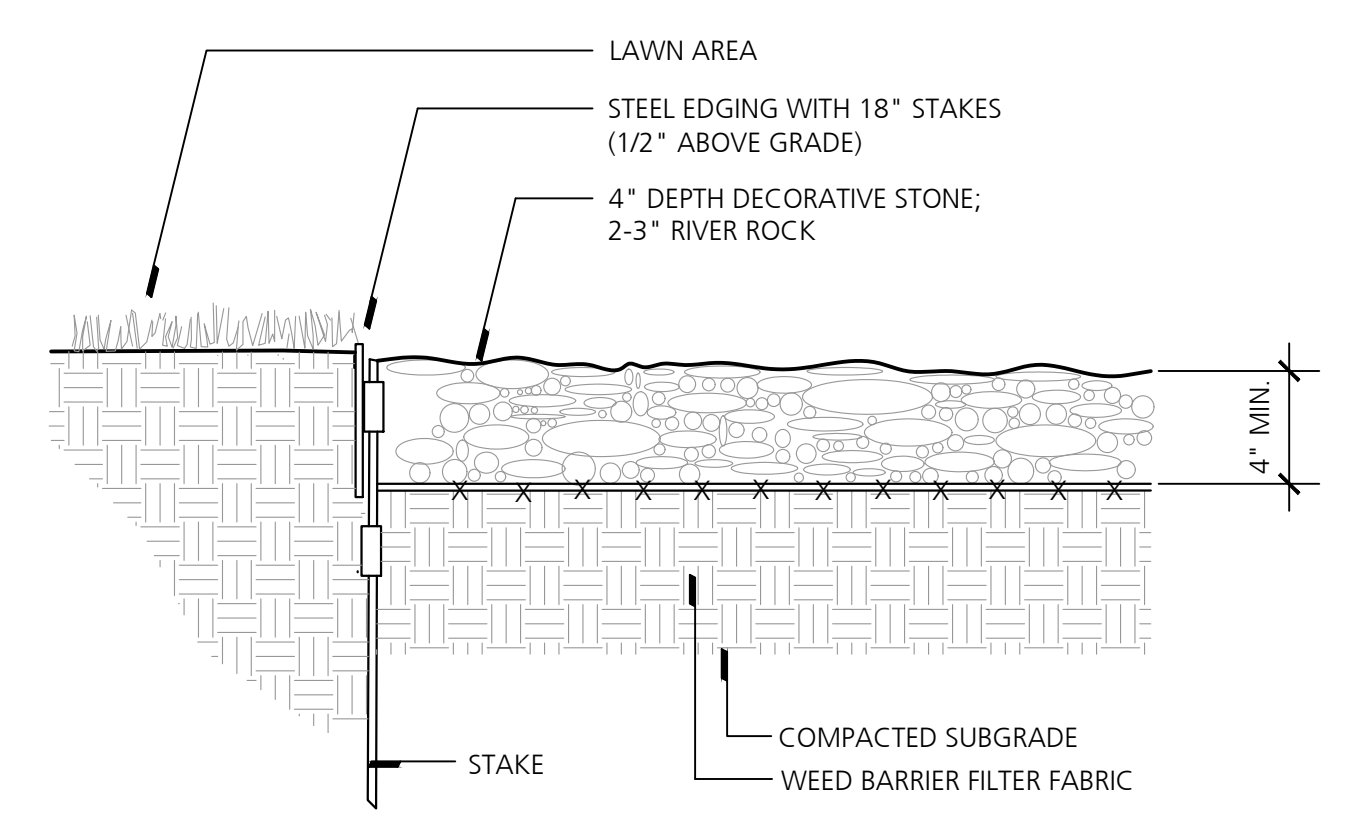
5 Plant Spacing - Square
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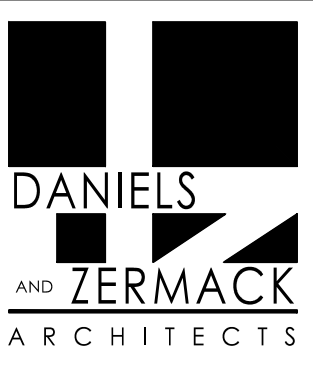
6 Steel Edging
NO SCALE



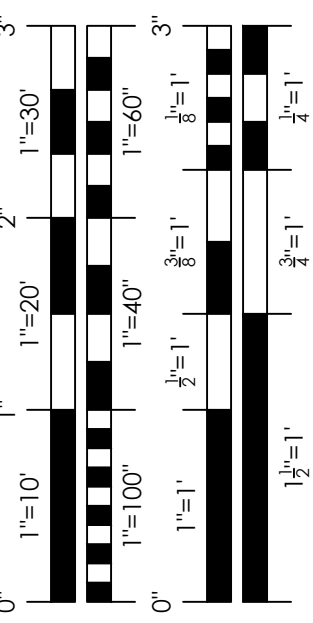
7 Parking Lot Island Grading
NO SCALE



8 Stone Maintenance Edge
NO SCALE



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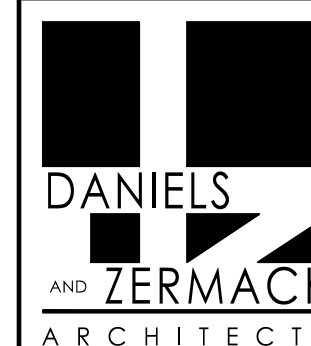


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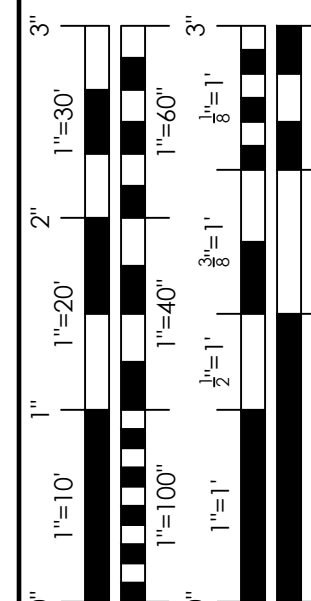


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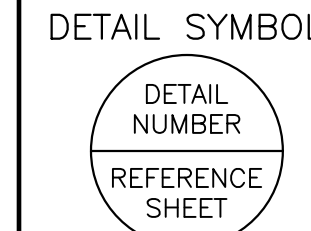


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DETAIL SYMBOL



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PLANT LIST

TREES					
QTY.	SYM.	BOTANICAL NAME	COMMON NAME	SIZE	COMMENTS
8	AR	ACER RUBRUM 'AUTUMN FLAME'	AUTUMN FLAME RED MAPLE	2.5" CAL.	SINGLE STRAIGHT TRUNK; FULL HEAD
5	AS	ACER SACCHARUM 'LEGACY'	LEGACY SUGAR MAPLE	2.5" CAL.	SINGLE STRAIGHT TRUNK; FULL HEAD
4	GB	GINKGO BILOBA 'AUTUMN GOLD'	AUTUMN GOLD GINKGO	2.5" CAL.	SINGLE STRAIGHT TRUNK; FULL HEAD
7	GT	GLEDTISIA TRIACANTHOS F. INERMIS 'SKYLINE'	SKYLINE THORNLESS HONEYLOCUST	2.5" CAL.	SINGLE STRAIGHT TRUNK; FULL HEAD
5	LP	PLATANUS X ACERIFOLIA 'BLOODGOOD'	BLOODGOOD LONDON PLANE TREE	2.5" CAL.	SINGLE STRAIGHT TRUNK; FULL HEAD
4	UP	ULMUS 'PATRIOT'	PATRIOT ELM	2.5" CAL.	SINGLE STRAIGHT TRUNK; FULL HEAD
8	QB	QUERCUS BICOLOR	SWAMP WHITE OAK	2.5" CAL.	SINGLE STRAIGHT TRUNK; FULL HEAD
6	QR	QUERCUS RUBRA	NORTHERN RED OAK	2.5" CAL.	SINGLE STRAIGHT TRUNK; FULL HEAD
ORNAMENTAL TREES					
QTY.	SYM.	BOTANICAL NAME	COMMON NAME	SIZE	COMMENTS
10	AC	AMELANCHIER CANADENSIS	SERVICEBERRY	8-10' HEIGHT	MULTI-STEM (3-4 MIN.); FULL UNIFORM HEAD
9	CC	CERCIS CANADENSIS	EASTERN REDBUD	8-10' HEIGHT	MULTI-STEM (3-4 MIN.); FULL UNIFORM HEAD
8	CH	CRATAEGUS CRUS-GALLI VAR. INERMIS	THORNLESS COCKSPUR HAWTHORN	8-10' HEIGHT	MULTI-STEM (3-4 MIN.); FULL UNIFORM HEAD
EVERGREEN TREES					
QTY.	SYM.	BOTANICAL NAME	COMMON NAME	SIZE	COMMENTS
10	PA	PICEA ABIES	NORWAY SPRUCE	7' HEIGHT	SINGLE STRAIGHT TRUNK; EXTRA FULL
SHRUBS & PERENNIALS					
QTY.	SYM.	BOTANICAL NAME	COMMON NAME	SIZE	COMMENTS
3	GV	BUXUS 'GREEN VELVET'	GREEN VELVET BOXWOOD	18-24" HEIGHT	FULL HEAVY PLANTS
43	CS	CORNUS SERICEA	RED OSIER DOGWOOD	30" HEIGHT	FULL HEAVY PLANTS
25	HV	HAMAMELIS VERNALIS 'AUTUMN EMBERS'	AUTUMN EMBERS VERNAL WITCH HAZEL	30" HEIGHT	FULL HEAVY PLANTS
61	SG	JUNIPERUS x PHITZERIANA 'SEA GREEN'	SEA GREEN JUNIPER	30" HEIGHT	FULL HEAVY PLANTS
54	AA	ARCONIA ARBUTIFOLIA 'BRILLIANTISSIMA'	BRILLIANT RED CHOKEBERRY	30" HEIGHT	FULL HEAVY PLANTS
39	VD	VIBURNUM DENTATUM 'ARROWWOOD'	ARROWWOOD VIBURNUM	30" HEIGHT	FULL HEAVY PLANTS
75	RC	ROSA 'CAREFREE WONDER'	CAREFREE WONDER SHRUB ROSE	3 GAL. CONT.	FULL HEAVY PLANTS
40	FG	PENNISETUM ALOPECUROIDES	DWARF FOUNTAIN GRASS	2 GAL. CONT.	EXTRA LARGE, FULL PLANTS
95	WL	NEPETA FAASSENSII 'WALKER'S LOW'	WALKER'S LOW CATMINT	1 GAL. CONT.	FULL HEAVY PLANTS; 24" O.C.
10	HG	HOSTA 'GOLD DROP'	GOLD DROP HOSTA	1 GAL. CONT.	FULL HEAVY PLANTS

LOW-PROFILE PRAIRIE SEED MIX (QTY. 2.51 ACRES)

BOTANICAL NAME	COMMON NAME	PLS OUNCES/ACRE
PERMANENT GRASSES:		
BOUTELOJA CURTIPENDULA	SIDE-OATS GRAMA	16
CAREX SPP.	PRAIRIE SEDGE SPECIES	4
ELYMUS CANADENSIS	CANADA WILD RYE	32
KOELERIA MACRANTHA	JUNE GRASS	1
PANICUM VIRGATUM	SWITCH GRASS	1
SCHIZACHYRIUM SCOPARIUM	LITTLE BLUESTEM	36
TOTAL		90
TEMPORARY COVER:		
AVENA SATIVA	COMMON OAT	360
LOLIUM MULTIFLORUM	ANNUAL RYE	100
TOTAL		460
FORBS:		
AMORPHA CANESCENS	LEAD PLANT	0.5
ASCLEPIAS SYRIACA	COMMON MILKWEEED	2
ASCLEPIAS TUBEROSA	BUTTERFLY WEED	2
BAPTISIA ALBA	WHITE WILD INDIGO	2
CHAMAECRISTA FASCICULATA	PARTRIDGE PEA	10
COREOPSIS PALMATA	SAND COREOPSIS	5
COREOPSIS CANDIDA	WHITE PRAIRIE CLOVER	1.5
DALEA PURPUREA	PURPLE PRAIRIE CLOVER	1.5
DESMANTHUS ILLINOENSIS	ILLINOIS SENSITIVE PLANT	3
ECHINACEA PURPUREA	BROAD-LEAVED PURPLE CONEFLOWER	8
ERYNGIUM YUCCIFOLIUM	RATTLESLAKE MASTER	2
LESPEDEZA CAPITATA	ROUND-HEADED BUSH CLOVER	2
LIATRIS ASPERA	ROUGH BLAZING STAR	0.5
LUPINUS PERENNIS V. OCCIDENTALIS	WILD LUPINE	4
MONARDA FISTULOSA	WILD BERGAMOT	0.5
OLIGONEURON RIGIDUM	STIFF GOLDENROD	1
PARTHENIUM INTEGRIFOLIUM	WILD QUININE	1
PENSTEMON DIGITALIS	FOXGLOVE BEARD TONGUE	0.5
PENSTEMON HIRSUTUS	HAIRY BEARD TONGUE	1
RATIBIDA PINNATA	YELLOW CONEFLOWER	4
RUDBECKIA HIRTA	BLACK-EYED SUSAN	5
RUDBECKIA SUBTOMENTOSA	SWEET BLACK-EYED SUSAN	1
SILPHIUM TEREBINTHINACEUM	PRAIRIE DOCK	1
SOLIDAGO SPECIOSA	SHOWY GOLDENROD	0.5
SYMPHYOTRICHUM ERICOIDES	HEATH ASTER	0.25
SYMPHYOTRICHUM LAEVE	SMOOTH BLUE ASTER	1
SYMPHYOTRICHUM NOVAE-ANGLIAE	NEW ENGLAND ASTER	0.5
TRADESCANTIA OHIENSIS	COMMON SPIDERWORT	1
VERBENA STRICTA	HOARY VERVAIN	1
VERNONIA GIGANTEA	SMOOTH TALL IRONWEED	1.5
VERONICASTRUM VIRGINICUM	CULVER'S ROOT	0.25
TOTAL		66

STORMWATER SEED MIX (QTY. 0.64 ACRES)

BOTANICAL NAME	COMMON NAME	PLS OUNCES/ACRE
PERMANENT GRASSES/SEDGES/RUSHES:		
BOLBOSCHOENUS FLUVIATILIS	RIVER BULRUSH	1
CAREX CRISTATELLA	CRESTED OVAL SEDGE	0.5
CAREX LURIDA	BOTTLEBRUSH SEDGE	3
CAREX VULPINOIDEA	BROWN FOX SEDGE	2
ELYMUS VIRGINICUS	VIRGINIA WILD RYE	24
GLYCERIA STRIATA	FOWL MANNA GRASS	1
JUNCUS EFFUSUS	COMMON RUSH	1
LEERSIA ORYZOIDES	RICE CUT GRASS	1
PANICUM VIRGATUM	SWITCH GRASS	2
SCHOENOPLECTUS TABERNAEMONTANI	GREAT BULRUSH	3
SCIRPUS ATROVIRENS	DARK GREEN RUSH	2
SCIRPUS CYPERINUS	WOOL GRASS	1
TOTAL		41.5
TEMPORARY COVER:		
AVENA SATIVA	COMMON OAT	360
LOLIUM MULTIFLORUM	ANNUAL RYE	100
TOTAL		460
FORBS & SHRUBS:		
ALISMA SUBCORDATUM	COMMON WATER PLANTAIN	2.5
ASCLEPIAS INCARNATA	SWAMP MILKWEEED	2
BIDENS SPP.	BIDENS SPECIES	2
EUPATORIUM PERFOLIATUM	COMMON BONESET	1
HELENIUM AUTUMNALE	SNEEZEWEED	2
IRIS VIRGINICA V. SHREVEI	BLUE FLAG	4
LYCOPUS AMERICANUS	COMMON WATER HOREHOUND	0.5
MIMULUS RINGENS	MONKEY FLOWER	1
PENTHORUM SEDOIDES	DITCH STONECROP	0.5
PERSCARIA SPP.	PINKWEED SPECIES	2
RUDBECKIA SUBTOMENTOSA	SWEET BLACK-EYED SUSAN	1
RUDBECKIA TRILOBA	BROWN-EYED SUSAN	1.5
SAGITTARIA LATIFOLIA	COMMON ARROWHEAD	1
SENNA HEBECARPA	WILD SENNA	2
SYMPHYOTRICHUM LANCEOLATUM	PANICLED ASTER	0.5
SYMPHYOTRICHUM NOVAE-ANGLIAE	NEW ENGLAND ASTER	0.5
THALICTRUM DASYPARPUM	PURPLE MEADOW RUE	2
TOTAL		26

