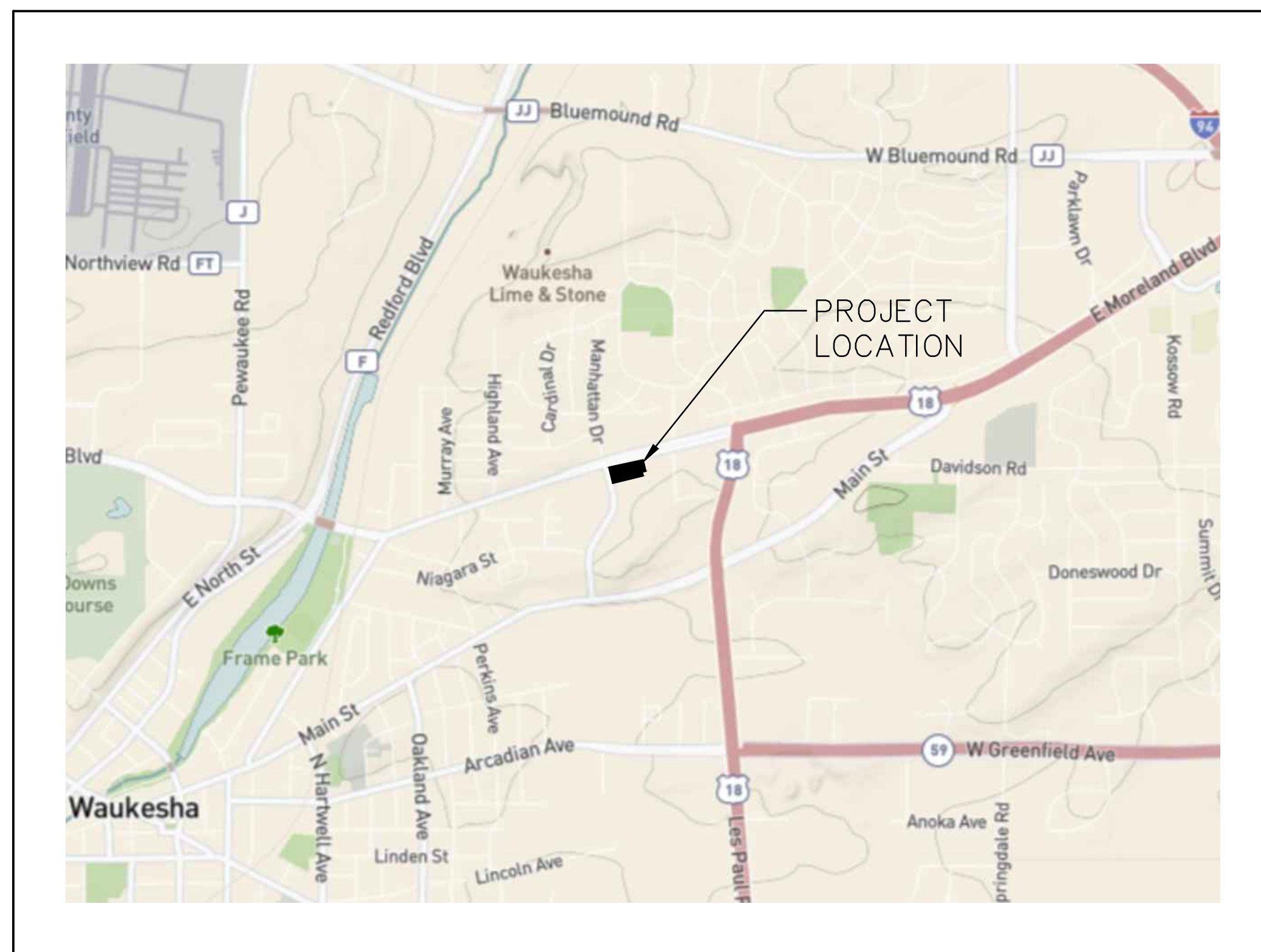


CONSTRUCTION PLANS FOR WAUKESHA GENESIS CITY OF WAUKESHA, WISCONSIN

VICINITY MAP



LEGEND (PROPOSED FEATURES)

- TREE REMOVAL
- EXISTING CONCRETE PAVEMENT TO BE REMOVED
- EXISTING ASPHALT PAVEMENT TO BE REMOVED
- EXISTING GRAVEL TO BE REMOVED
- EXISTING BUILDING/STRUCTURE TO BE REMOVED
- SAWCUT LINE
- PROPOSED PROPERTY LINE
- PROPOSED SITE LIGHTING (DESIGNED BY OTHERS, FOR REFERENCE ONLY)
- MONUMENT SIGNS (CONSTRUCTION DETAILS BY OTHERS)
- SIGN
- HEAVY-DUTY CONCRETE PAVEMENT
- CONCRETE SIDEWALK
- HEAVY-DUTY ASPHALT PAVEMENT
- STANDARD-DUTY ASPHALT PAVEMENT
- COLORED AND STAMPED CONCRETE
-

LEGEND

- () INDICATES RECORDED DIMENSION WHERE DIFFERENT FROM ACTUAL MEASUREMENT
- SECTION OR 1/4 SECTION CORNER AS DESCRIBED
-
-
- BOLLARD
- SOIL BORING/MONITORING WELL
- FLAGPOLE
- MAILBOX
- SIGN
- BILLBOARD
- AIR CONDITIONER
- CONTROL BOX
- TRAFFIC SIGNAL
- RAILROAD CROSSING SIGNAL
- CABLE PEDESTAL
- POWER POLE
- GUY POLE
- LIGHT POLE
- SPOT/YARD/PEDESTAL LIGHT
- HANDICAPPED PARKING
- ELECTRIC MANHOLE
- ELECTRIC PEDESTAL
- ELECTRIC METER
- ELECTRIC TRANSFORMER
- TELEPHONE MANHOLE
- TELEPHONE PEDESTAL
- MARKED FIBER OPTIC
- GAS VALVE
- GAS METER
- GAS WARNING SIGN
- STORM MANHOLE
- ROUND INLET
- SQUARE INLET
- STORM SEWER END SECTION
- SANITARY MANHOLE
- SANITARY CLEANOUT OR SEPTIC VENT
- SANITARY INTERCEPTOR MANHOLE
- MISCELLANEOUS MANHOLE
- WATER VALVE
- HYDRANT
- WATER SERVICE CURB STOP
- WATER MANHOLE
- WELL
- WATER SURFACE
- WETLANDS FLAG
- MARSH
- CONIFEROUS TREE
- DECIDUOUS TREE
- SHRUB
- EDGE OF TREES
- SANITARY SEWER
- STORM SEWER
- WATERMAIN
- MARKED GAS MAIN
- MARKED ELECTRIC
- OVERHEAD WIRES
- BUREAU ELEC. SERV.
- MARKED TELEPHONE
- MARKED CABLE TV LINE
- MARKED FIBER OPTIC
- INDICATES EXISTING CONTOUR ELEVATION
- INDICATES EXISTING SPOT ELEVATION
- EXISTING PROPERTY LINE
- EXISTING EASEMENT LINE

PLAN INDEX

SHEET NO.	DESCRIPTION
C000	COVER SHEET
C100	EXISTING CONDITIONS, DEMOLITION AND EROSION CONTROL PLAN
C200	OVERALL SITE PLAN
C201	DIMENSIONED SITE PLAN
C300	GRADING PLAN
C400	UTILITY PLAN
C500	EROSION CONTROL DETAILS
C501	SITE DETAILS
C502	UTILITY DETAILS
C503	UNDERGROUND STORAGE DETAILS
C504	UNDERGROUND STORAGE DETAILS
C505	UNDERGROUND STORAGE DETAILS
C600	SPECIFICATIONS
L100	LANDSCAPE PLAN
L200	LANDSCAPE NOTES & DETAILS

WAUKESHA GENESIS
CITY OF WAUKESHA, WISCONSIN
COVER SHEET

ENGINEER AND LANDSCAPE ARCHITECT:

raSmith
 CREATIVITY BEYOND ENGINEERING
 RYAN J. LANCOUR, P.E. PROJECT MANAGER
 PH: (262) 317-3259

PROPERTY OWNER:

BOUCHER HOLDINGS LLC
 4141 S. 108TH STREET
 GREENFIELD, WI 53228
 PH: (414) 427-4141

DEVELOPER:

CHAD KEMNITZ, PRESIDENT
 PROFESSIONAL CONSULTANTS, INC.
 300 COTTONWOOD AVENUE, #7
 HARTLAND, WI 53029
 PH: (262) 367-6080

BENCHMARK 1:

SET "X" NW FLANGE BOLT ON HYDRANT ON SOUTHERLY ROW OF E MORELAND BLVD
 ELEVATION = 101.36'
 VERTICAL DATUM: CITY OF WAUKESHA DATUM

SEWRPC BENCHMARK 1:

CONC MON W/ BRASS CAP IN CONC CURB ON NORTH SIDE EAST BOUND LANE OF USH 18
 NW CORNER SW 1/4 OF SEC 36
 ELEVATION = 876.98'
 N: 378,689.51 USFT
 E: 2,448,163.35 USFT

SEWRPC BENCHMARK 2:

CONC MON W/ BRASS CAP SW CORNER SW 1/4 OF SEC 36
 ELEVATION = 841.03'
 N: 376,029.00 USFT
 E: 2,448,203.06 USFT



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 Call before you dig.

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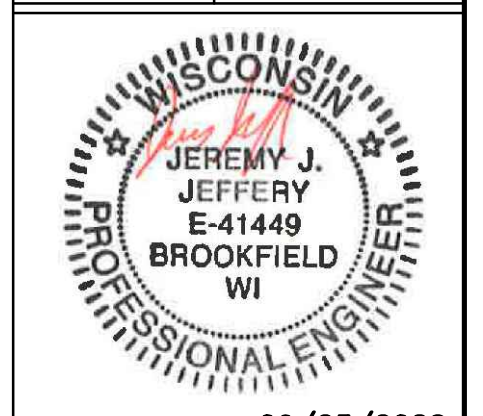
CITY OF WAUKESHA NOTE

ALL SITE IMPROVEMENTS AND CONSTRUCTION SHOWN ON PLANS SHALL CONFORM TO THE CITY OF WAUKESHA DEVELOPMENT HANDBOOK & INFRASTRUCTURE SPECIFICATIONS. WHERE THE PLANS DO NOT COMPLY, IT SHALL BE THE SOLE RESPONSIBILITY AND EXPENSE OF THE DEVELOPER TO MAKE REVISIONS TO THE PLANS AND/OR CONSTRUCTED INFRASTRUCTURE TO COMPLY.

PLAN DATE: 09/23/2022	
REVISIONS	ISSUE DATE SHEET NO.'S ISSUED FOR:

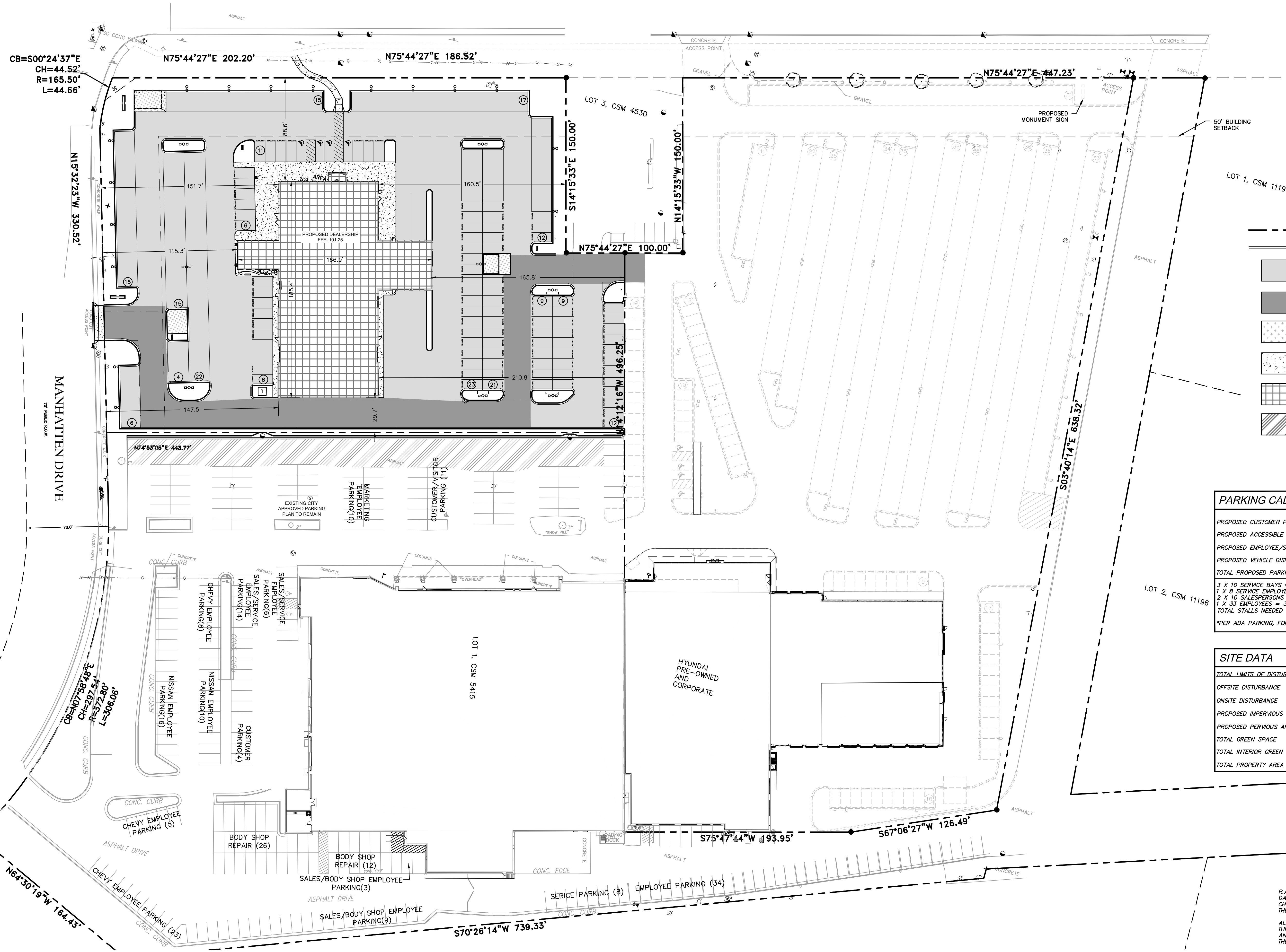
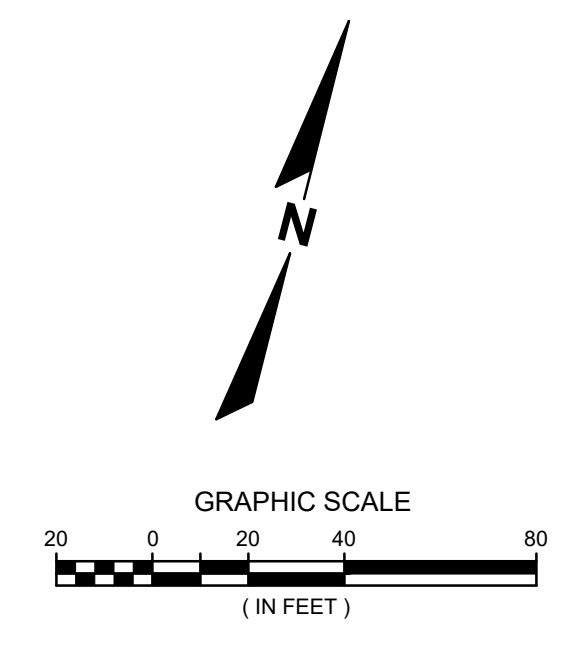
16745 W. Bluemound Road
 Brookfield, WI 53005-5938
 (262) 781-1000
raSmith
 CREATIVITY BEYOND ENGINEERING
 rasmith.com

Brookfield, WI | Milwaukee, WI | Appleton, WI | Madison, WI
 Cedarburg, WI | Naperville, IL | Irvine, CA



09/23/2022
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 R.A. Smith, Inc.
 DATE: 09/23/2022
 SCALE: NTS
 JOB NO. 3210204.01
 PROJECT MANAGER:
 RYAN J. LANCOUR, P.E.
 DESIGNED BY: JJJ
 CHECKED BY: RJL
SHEET NUMBER
 C000

E. MORELAND BLVD.



LEGEND

- PROPERTY LINE
- PROPOSED 18" CURB & GUTTER
- STANDARD-DUTY ASPHALT PAVEMENT
- HEAVY-DUTY ASPHALT PAVEMENT
- HEAVY-DUTY CONCRETE PAVEMENT
- CONCRETE SIDEWALKS
- NEW BUILDING
- SEAL COAT
- PROPOSED SITE LIGHTING (BY OTHERS)

PARKING CALCULATIONS

PROPOSED CUSTOMER PARKING	19
PROPOSED ACCESSIBLE PARKING	4
PROPOSED EMPLOYEE/SERVICE PARKING	71
PROPOSED VEHICLE DISPLAY PARKING	111
TOTAL PROPOSED PARKING	205

3 X 10 SERVICE BAYS = 30 STALLS
 1 X 8 SERVICE EMPLOYEES = 8 STALLS
 2 X 10 SALESPERSONS = 20 STALLS
 1 X 33 EMPLOYEES = 33 STALLS
TOTAL STALLS NEEDED = 91 STALLS (94 STALLS PROPOSED)
 *PER ADA PARKING, FOR 94 STALLS 4 SHOULD BE ACCESSIBLE

SITE DATA

TOTAL LIMITS OF DISTURBANCE	1,32,020 SF (3.03 AC)
OFFSITE DISTURBANCE	3,975 SF (0.09 AC)
ONSITE DISTURBANCE	128,045 SF (2.94 AC)
PROPOSED IMPERVIOUS AREA	113,263 SF (2.60 AC)
PROPOSED PERVIOUS AREA	14,781 SF (0.34 AC)
TOTAL GREEN SPACE	11.56%
TOTAL INTERIOR GREEN SPACE	5.68%
TOTAL PROPERTY AREA	128,044 SF (2.94 AC)



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(262) 781-1000
rasmith.com

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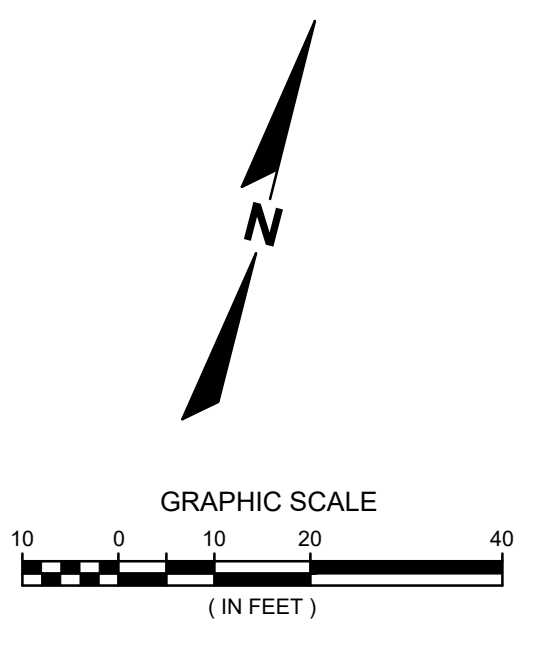
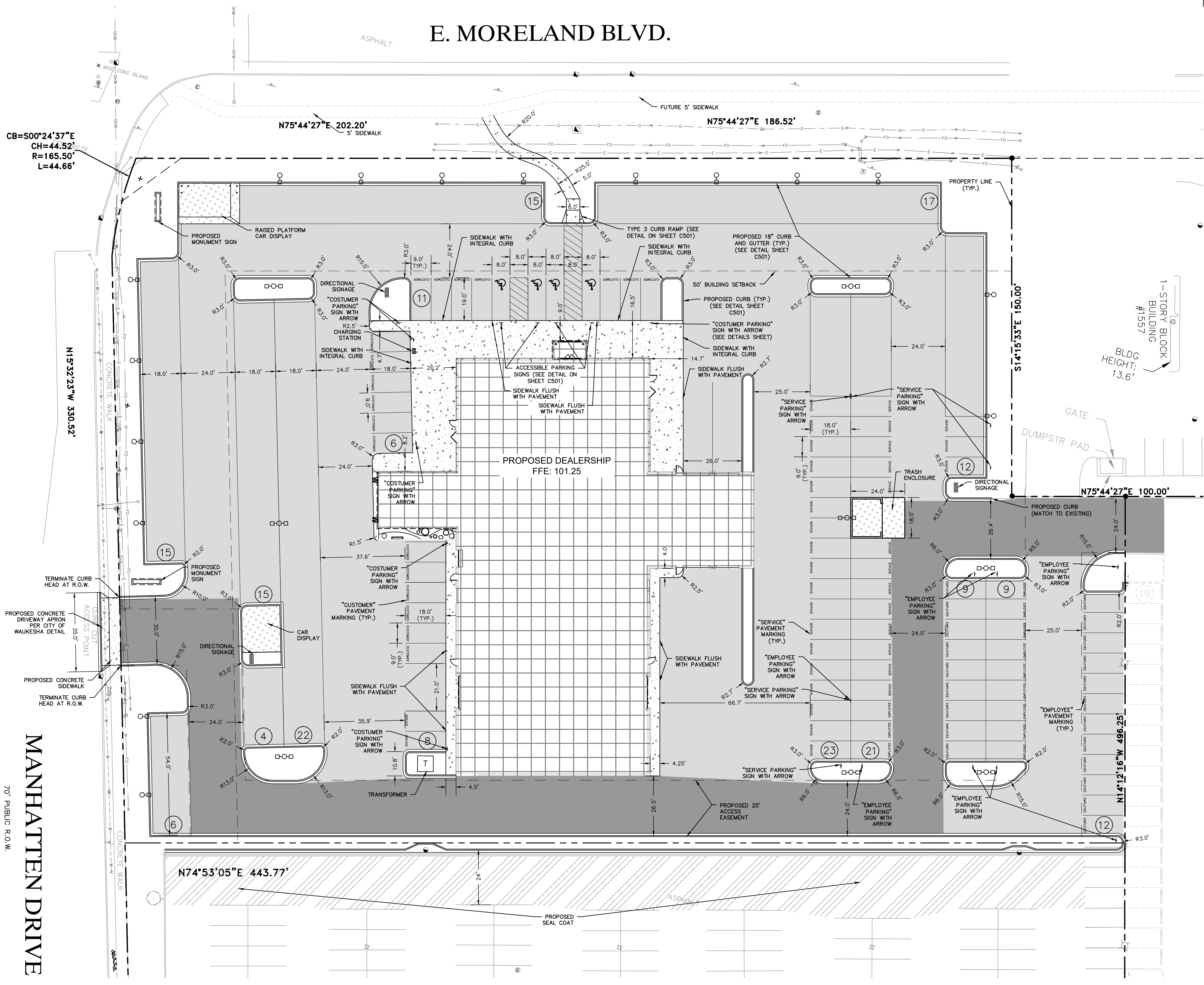
Brookfield, WI | Milwaukee, WI | Appleton, WI | Madison, WI
Cedarburg, WI | Naperville, IL | Irvine, CA

**WAUKESHA GENESIS
CITY OF WAUKESHA, WISCONSIN
OVERALL SITE PLAN**

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DATE: 09/23/2022
SCALE: 1" = 40'
JOB NO. 3210204.01
PROJECT MANAGER: RYAN J. LANCOUR, P.E.
DESIGNED BY: JJJ
CHECKED BY: RJL
SHEET NUMBER C200

P:\3210204\3210204.01-Genesis\DWG\Sheets\3210204.01-5901.dwg, SITE PLAN, 9/23/2022 10:06:07 PM, .iii

E. MORELAND BLVD.



DATE	DESCRIPTION

16745 W. Bluemound Road
 Brookfield, WI 53005-5938
 (262) 781-1000
 rasmith.com

raSmith
 CREATIVITY BEYOND ENGINEERING

Brookfield, WI | Milwaukee, WI | Appleton, WI | Madison, WI
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WAUKESHA GENESIS
 CITY OF WAUKESHA, WISCONSIN

DIMENSIONED SITE PLAN



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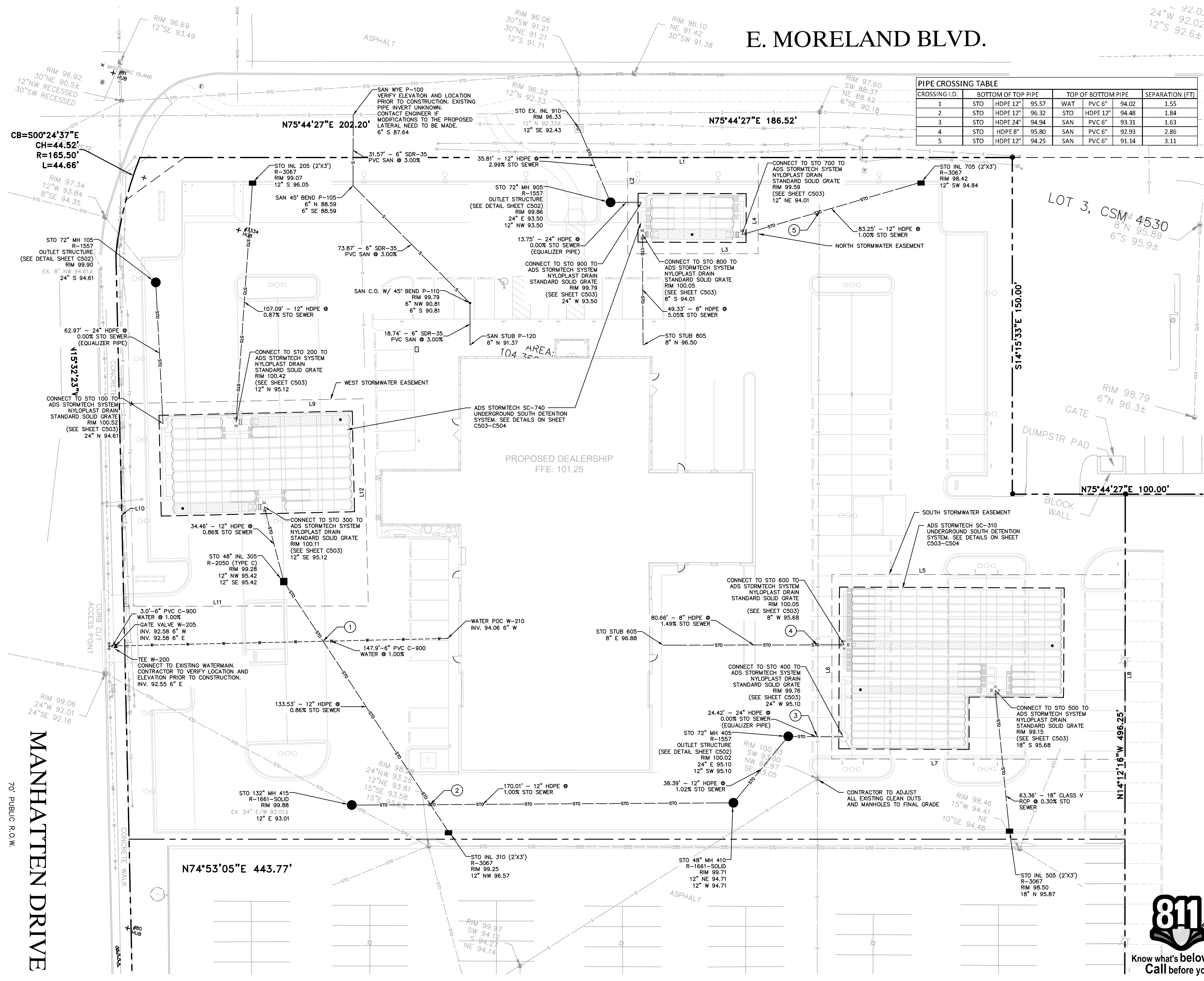
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DATE: 09/23/2022
SCALE: 1" = 20'
JOB NO. 3210204.01
PROJECT MANAGER: RYAN J. LANCOUR, P.E.
DESIGNED BY: JJJ
CHECKED BY: RJL
SHEET NUMBER
C201

MANHATTEN DRIVE
 70' PUBLIC R.O.W.

P:\3210204\3210204.01-Genesis\DWG\Sheets\3210204.01-SFD.dwg, DIMENSIONED SITE PLAN, 9/23/2022, 1:06:37 PM, jll

E. MORELAND BLVD.



PIPE CROSSING TABLE

CROSSING I.D.	BOTTOM OF TOP PIPE	TOP OF BOTTOM PIPE	SEPARATION (FT)
1	STO HDPE 12"	WAT PVC 6"	1.55
2	STO HDPE 12"	STO HDPE 12"	1.84
3	STO HDPE 24"	SAN PVC 6"	1.63
4	STO HDPE 8"	SAN PVC 6"	2.86
5	STO HDPE 12"	SAN PVC 6"	3.11

- NOTES:**
- ALL PIPE LENGTHS ARE TO CENTER OF EXISTING OR PROPOSED STRUCTURE.
 - CONTRACTOR SHALL FIELD VERIFY ALL PROPOSED POINTS OF CONNECTION TO EXISTING PIPE, STRUCTURES OR KNOWN CROSSINGS PRIOR TO PROPOSED UTILITY CONSTRUCTION. CONTACT ENGINEER IF POSSIBLE REDESIGN IF EXISTING PIPE SIZES OR INVERTS VARY FROM THIS PLAN.
 - CONTRACTOR SHALL FIELD ADJUST ALL EXISTING UTILITY STRUCTURES TO PROPOSED GRADE WITHIN THE PROJECT LIMITS. SEE GRADING & DRAINAGE PLANS FOR PROPOSED RIM GRADES.
 - ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR WATER AND SEWER CONSTRUCTION IN WISCONSIN, LATEST EDITION.
 - CONTRACTOR TO FIELD LOCATE ALL EXISTING LATERAL LOCATIONS & ELEVATIONS PRIOR TO UTILITY CONSTRUCTION.
 - ALL WATER SERVICES SHALL HAVE MINIMUM 6.0' OF COVER.
 - CONTRACTOR SHALL COORDINATE FINAL SIZING WITH THE OWNER PRIOR TO PROCUREMENT OF THE GREASE INTERCEPTOR(S).
 - CONTRACTOR TO MAINTAIN MINIMUM 18" CLEARANCE WHEN WATER MAIN CROSSES UNDER SANITARY SEWER, AND 6" MINIMUM UNDER STORM SEWER. PROVIDE 2" INSULATION BETWEEN WATER MAIN AND SEWER CROSSINGS WHERE THE VERTICAL SEPARATION IS LESS THAN 2.0'.
 - ALL VALVES INSTALLED AT GREATER THAN 8 FEET OF DEPTH SHALL BE PROVIDED WITH VALVE STEM EXTENSIONS TO BRING THE OPERATING NUT UP TO A NORMAL DEPTH (EQUIVALENT TO A VALVE AT 8 FEET OF DEPTH). THE EXTENSION SHALL BE SECURED TO THE OPERATING NUT WITH AT LEAST 2 SET SCREWS DRILLED INTO THE NUT. PROVIDE A CENTERING RING AT THE TOP OF THE EXTENSION.
 - FOR LEGEND, REFER TO SHEET C000.
 - THE STORM WATER FACILITY SHALL BE INSPECTED BY A CITY OF WAUKESHA INSPECTOR AT LEAST ONCE DURING CONSTRUCTION AND ONCE AFTER THE FINAL SITE STABILIZATION OF THE SITE.
 - SEWER LATERAL VIDEO: THE EXISTING BUILDING HAS A SANITARY SEWER LATERAL CONNECTING THE CITY'S SEWER MAIN. PLEASE PROVIDE A SEWER LATERAL VIDEO TO CITY FOR REVIEW AND APPROVAL. CONTACT THE CITY ENGINEERING DEPARTMENT FOR VIDEO FORMAT. IF THE LATERAL MAINTENANCE IS NEEDED, THEN THE LATERAL IMPROVEMENTS MAY NEED TO BE INCLUDED AS PART OF THIS PROJECT. THE LATERAL PIPE CONNECTION TO THE MAIN MAY NEED TO BE LINED OR RELATED TO REDUCE INFILTRATION INTO THE CITY'S SANITARY SEWER SYSTEM OR IMPROVE THE STRUCTURAL INTEGRITY.
 - A RECORD DRAWING OF THE SANITARY/STORM SEWER FACILITIES SEALED BY A PROFESSIONAL ENGINEER OR REGISTERED LANDSURVEYOR SHALL BE SUBMITTED TO THE ENGINEERING DEPARTMENT.

North SW Easement Line Table

Line #	Length	Direction
L1	58.23	S75° 44' 27.34"W
L2	42.85	S14° 15' 32.66"E
L3	58.15	N75° 44' 27.34"E
L4	42.85	N14° 08' 53.41"W

South SW Easement Line Table

Line #	Length	Direction
L5	130.72	N75° 47' 44.34"E
L6	82.27	N14° 14' 36.22"W
L7	130.67	S75° 47' 44.34"W
L8	82.27	S14° 12' 15.66"E

West SW Easement Line Table

Line #	Length	Direction
L9	108.70	S74° 34' 35.34"W
L10	90.28	S15° 32' 25.57"E
L11	108.96	N75° 44' 27.54"E
L12	92.50	N15° 41' 11.34"W



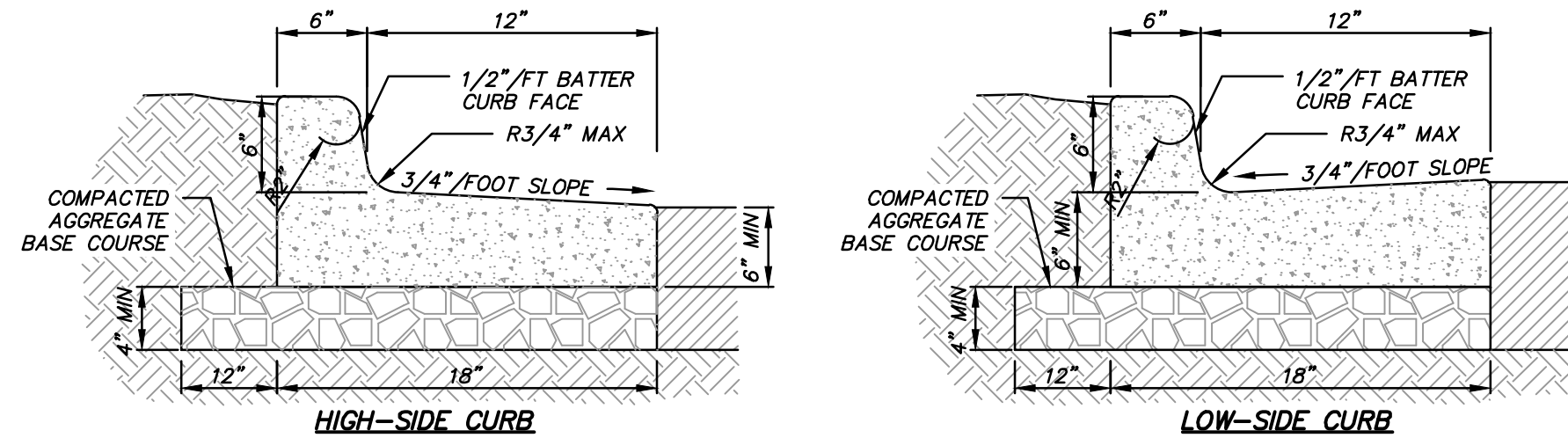
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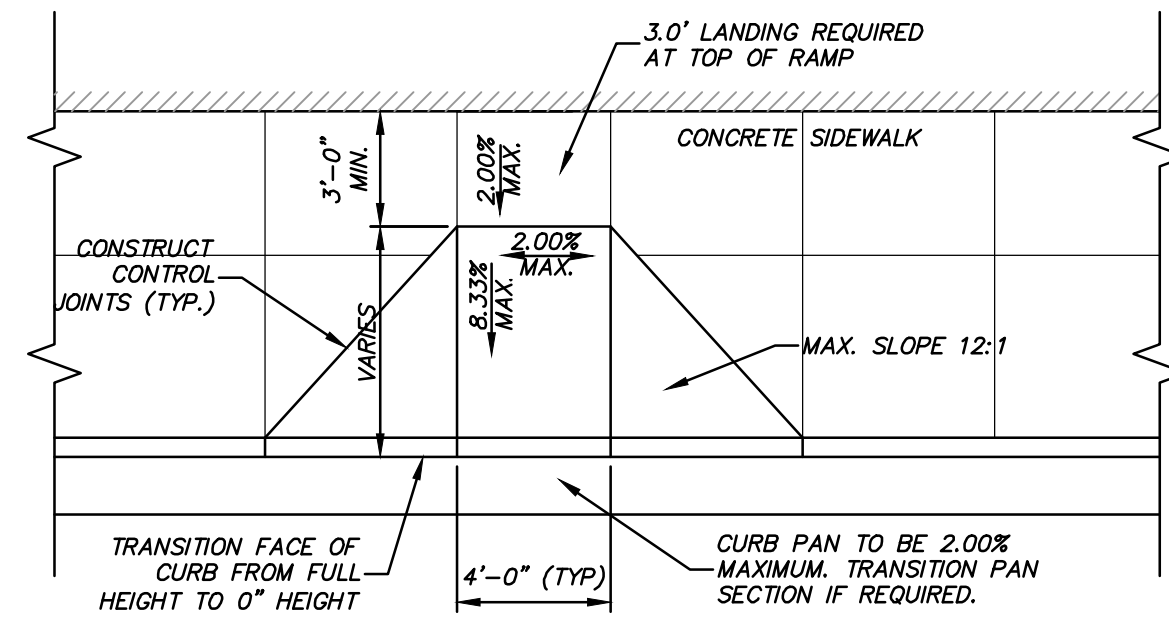
DESCRIPTION	
DATE	
16745 W. Bluemound Road Brookfield, WI 53005-5938 (262) 781-1000 rasmith.com	
CREATIVITY BEYOND ENGINEERING	
Brookfield, WI Milwaukee, WI Appleton, WI Madison, WI Cedarburg, WI Naperville, IL Irvine, CA	
WAUKESHA GENESIS CITY OF WAUKESHA, WISCONSIN	UTILITY PLAN
© COPYRIGHT 2022 R.A. Smith, Inc. DATE: 09/23/2022 SCALE: 1" = 20' JOB NO. 3210204.01 PROJECT MANAGER: RYAN J. LANCOUR, P.E. DESIGNED BY: JJJ CHECKED BY: RJL	
SHEET NUMBER C400	

MANHATTEN DRIVE
 70' PUBLIC R.O.W.
 P:\3210204\3210204.01-UP01.dwg, UTILITY PLAN, 9/23/2022 10:07:48 PM, III

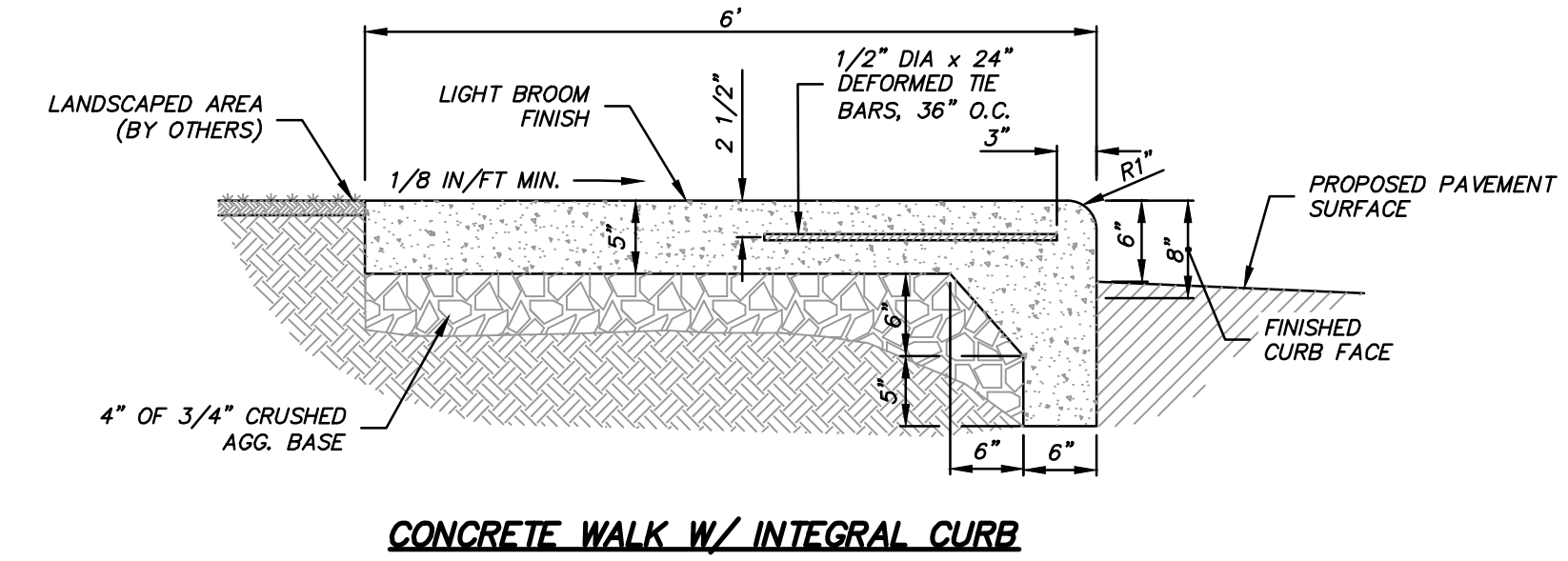


NOTES:
 A) 3500 PSI CONCRETE SHALL BE USED IN CONSTRUCTION OF THE CURB & GUTTER.
 B) THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE SLOPE OF THE GUTTER PAN.
 C) FOR DEPRESSED CURB HEAD SLOPE, USE THE SAME SLOPE AS ADJACENT SIDEWALK.
 D) THE BOTTOM OF THE CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE. PROVIDE MINIMUM 6" GUTTER THICKNESS MAINTAINED. TRANSVERSE CONTRACTION JOINTS SHALL BE CUT OR SAWED AT MAXIMUM 20 FOOT INTERVALS.
 E) 1/2" PREFORMED EXPANSION JOINT FILLER SHALL BE PLACED TRANSVERSELY IN THE CURB ABUTTING EXISTING CURB AND SIDEWALK, WALLS OR BUILDINGS, AND AT INTERVALS NOT TO EXCEED 300 FEET, WITH PREFERRED LOCATIONS BEING AT RADIUS POINTS OR ANGLE POINTS.

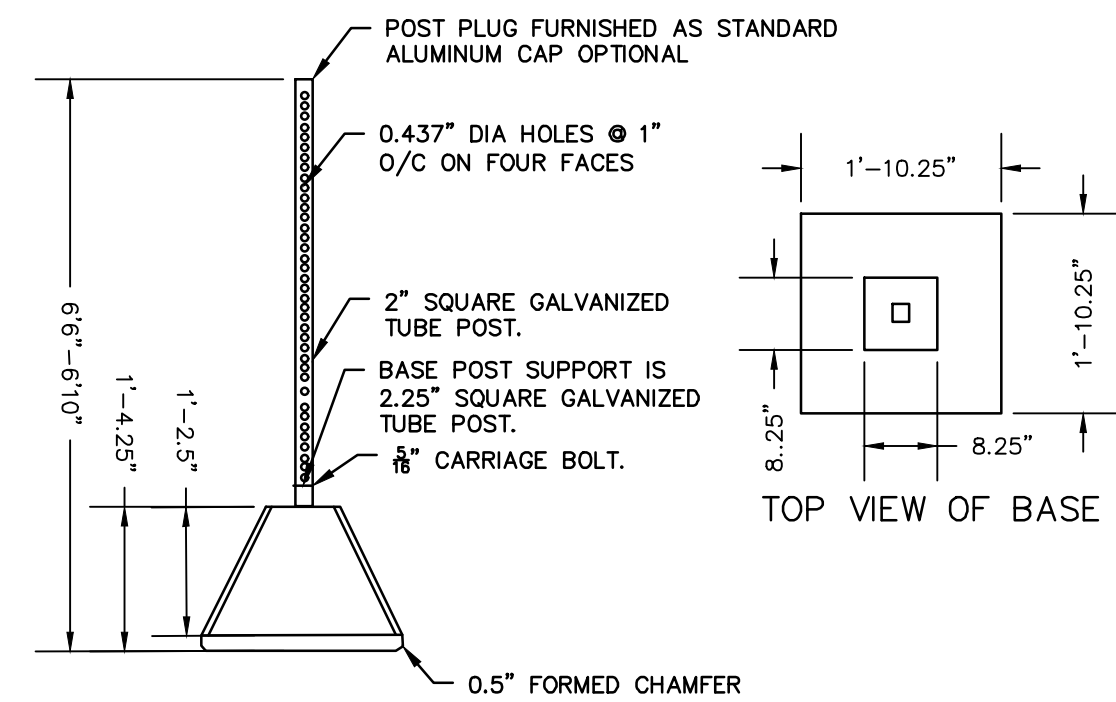
ON-SITE CONCRETE CURB & GUTTER DETAIL



TYPE 3 CURB RAMP

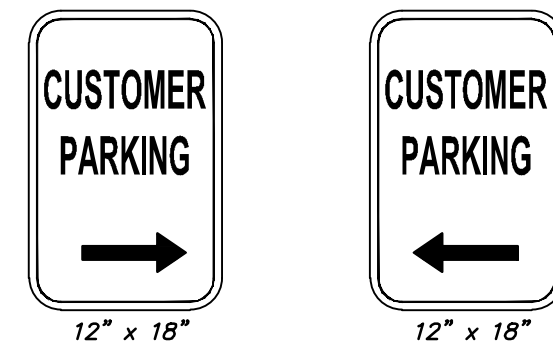


CONCRETE WALK W/ INTEGRAL CURB



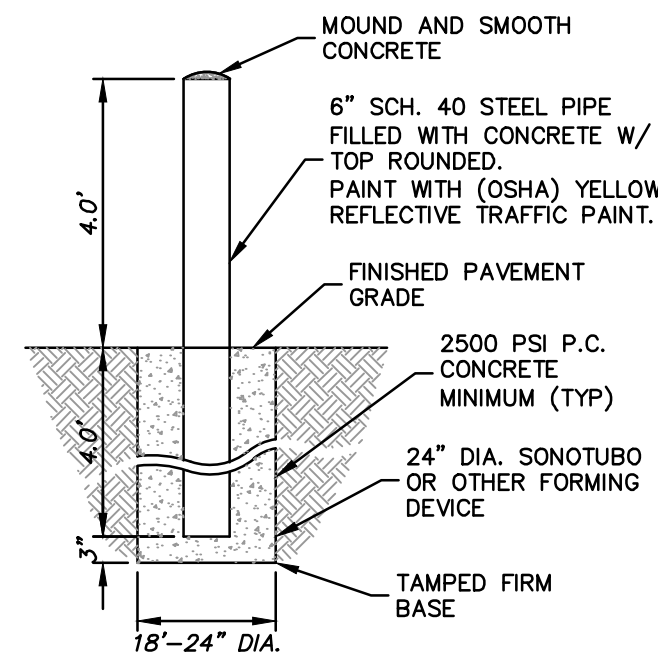
PORTABLE CONCRETE SIGN BASE
(NOT TO SCALE)

NOTES:
 1. MAT'L: AIR ENTRAINED REINFORCED CONCRETE

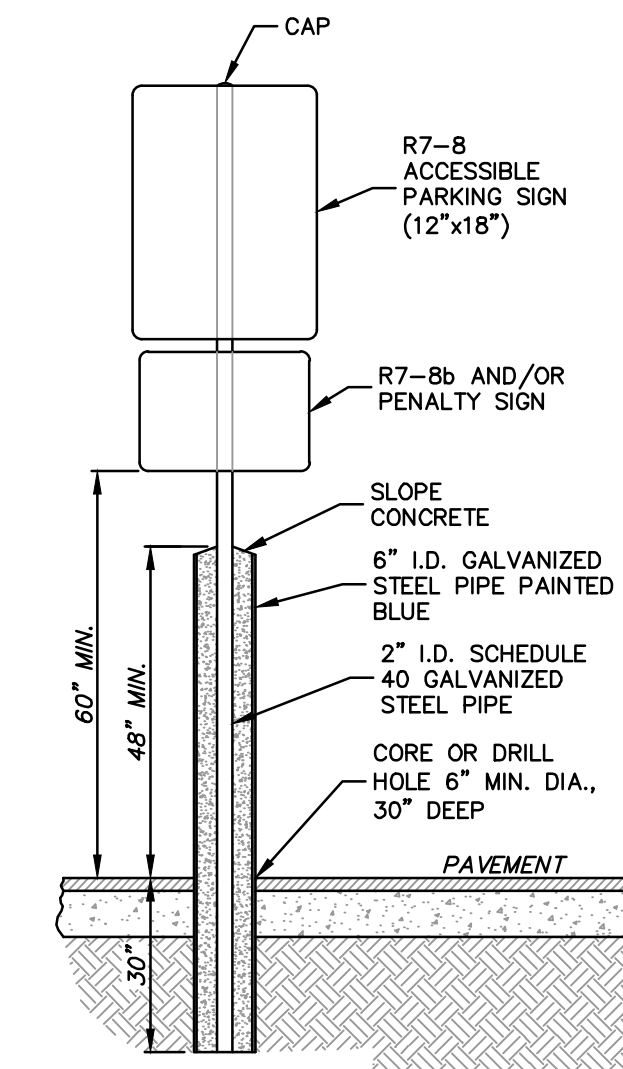


CUSTOMER PARKING SIGN
(NOT TO SCALE)

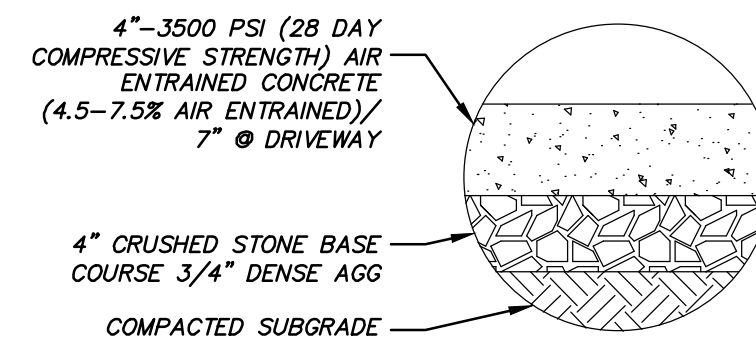
CUSTOMER PARKING (R ARROW) = 3
 CUSTOMER PARKING (L ARROW) = 3
 SERVICE PARKING (R ARROW) = 3
 SERVICE PARKING (L ARROW) = 3
 EMPLOYEE PARKING (R ARROW) = 4
 EMPLOYEE PARKING (L ARROW) = 4



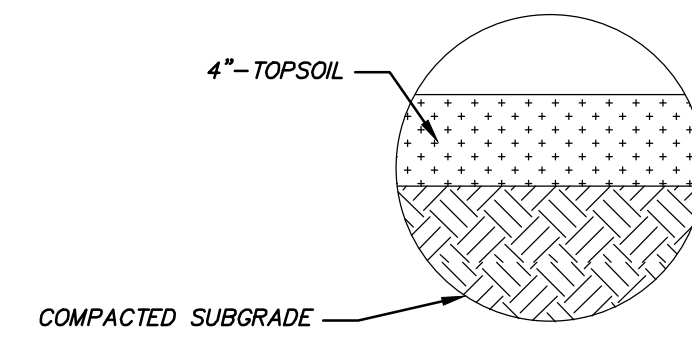
BOLLARD DETAIL



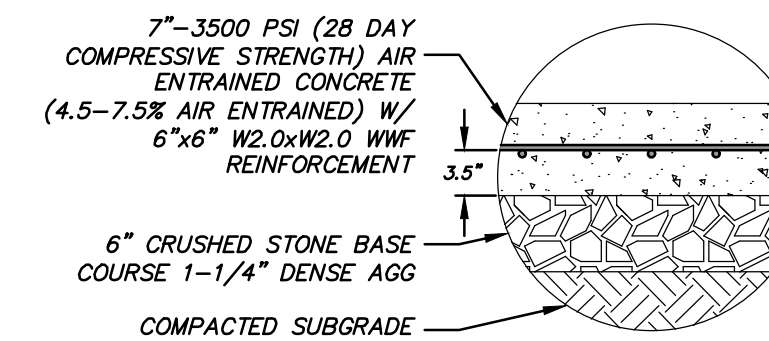
ACCESSIBLE PARKING SIGN AND POST INSTALLATION IN BOLLARD
TYPE 2



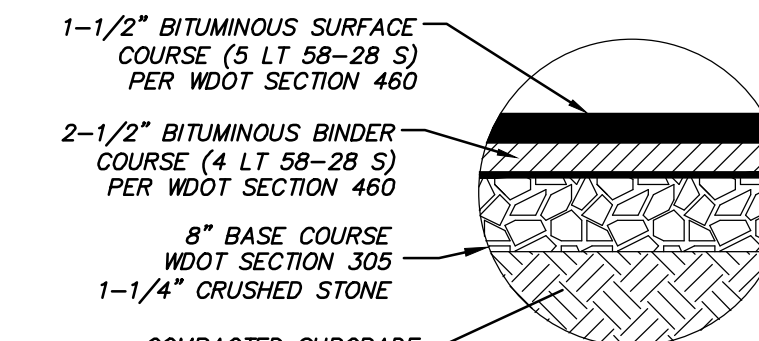
PUBLIC CONCRETE SIDEWALK SECTION



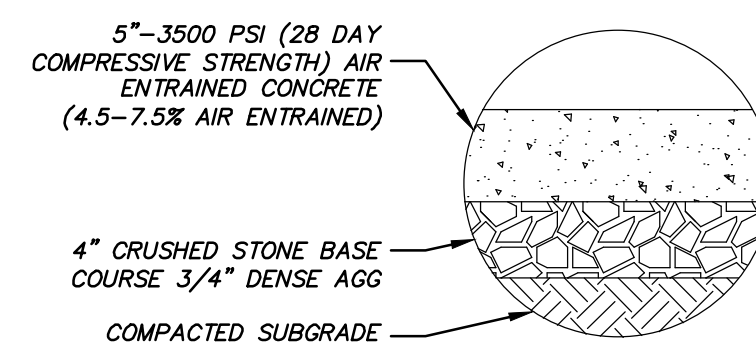
LANDSCAPED AREAS (ALL NON-PAVED AREAS)



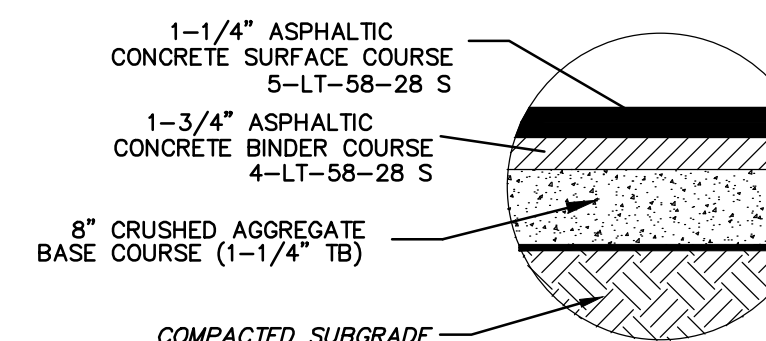
CONCRETE PAVEMENT SECTION



ASPHALT PAVEMENT SECTION (HEAVY DUTY)



CONCRETE SIDEWALK PAVEMENT SECTION



ASPHALT PAVEMENT SECTION (STANDARD DUTY)



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DESCRIPTION
DATE

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 Brookfield, WI 53005-5938
 (262) 781-1000
 rasmith.com



Brookfield, WI | Milwaukee, WI | Appleton, WI | Madison, WI
 Cedarburg, WI | Naperville, IL | Irvine, CA

WAUKESHA GENESIS
CITY OF WAUKESHA, WISCONSIN

SITE DETAILS

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 R.A. Smith, Inc.
 DATE: 09/23/2022
 SCALE: N.T.S.
 JOB NO. 3210204.01
 PROJECT MANAGER:
 RYAN J. LANCOUR, P.E.
 DESIGNED BY: JJJ
 CHECKED BY: RJL

SHEET NUMBER
 C501

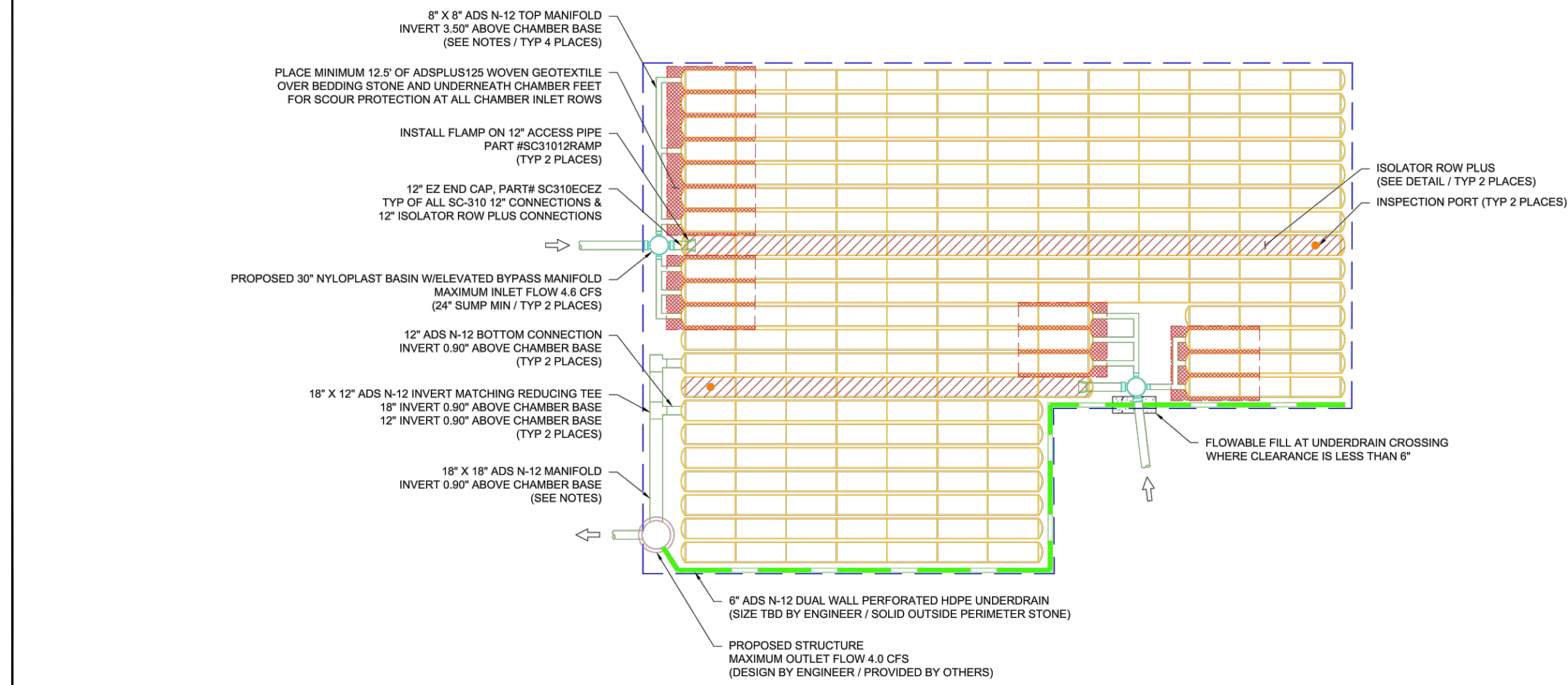
CITY OF WAUKESHA DEPARTMENT OF PUBLIC WORKS	STANDARD CONSTRUCTION DETAILS --CURB TAPER--	DETAIL NUMBER: 07-0252
APPROVED: ALEX DAMEN DATE: _____	DRAWN BY: JEBEL DATE: 12/13/18	PLOT SCALE: 3" = 1'
CHECKED BY: _____ DATE: _____	PROJECT NO: _____	PLOT DATE: 12/13/2018 8:42 AM

PROPOSED LAYOUT - SOUTH SYSTEM

223	STORMTECH SC-310 CHAMBERS
50	STORMTECH SC-310 END CAPS
6	STONE ABOVE (IN)
6	STONE BELOW (IN)
40	% STONE VOID
7.794	INSTALLED SYSTEM VOLUME (CF) (PERIMETER STONE INCLUDED)
6235	SYSTEM AREA (FT ²)
344	SYSTEM PERIMETER (ft)

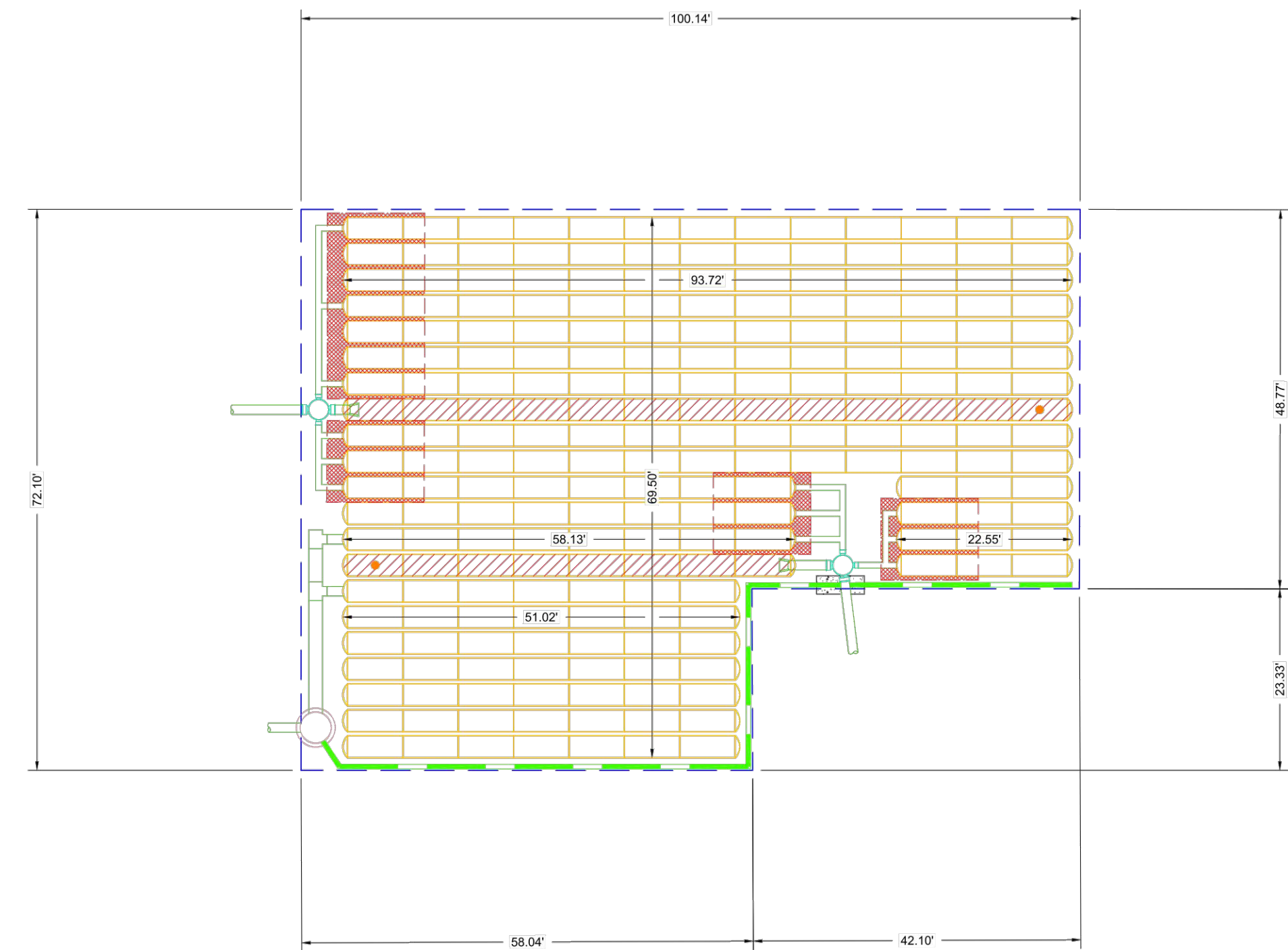
NOTES

- MANHOLE SIZE TO BE DETERMINED BY SITE DESIGN ENGINEER. SEE TECHNICAL NOTE 6.32 FOR MANHOLE SIZING GUIDANCE.
- DUE TO THE ADAPTATION OF THIS CHAMBER SYSTEM TO SPECIFIC SITE AND DESIGN CONSTRAINTS, IT MAY BE NECESSARY TO CUT AND COUPLE ADDITIONAL PIPE TO STANDARD MANHOLE COMPONENTS IN THE FIELD.
- THIS CHAMBER SYSTEM WAS DESIGNED WITHOUT SITE-SPECIFIC INFORMATION ON SOIL CONDITIONS OR BEARING CAPACITY. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR DETERMINING THE SUITABILITY OF THE SOIL AND PROVIDING THE BEARING CAPACITY OF THE IN-SITU SOILS. THE BASE STONE DEPTH MAY BE INCREASED OR DECREASED ONCE THIS INFORMATION IS PROVIDED.



Waukesha Genesis
StormTech Chamber System
 4840 TREUMAN BLVD HILLIARD, OH 43026
 PROJECT # 888-892-2884 | WWW.STORMTECH.COM
 DATE: 07/19/22 DRAWN: MPV CHECKED: JRS
 PROJECT # 8307399
 DATE: 07/19/22 DRAWN: MPV CHECKED: JRS

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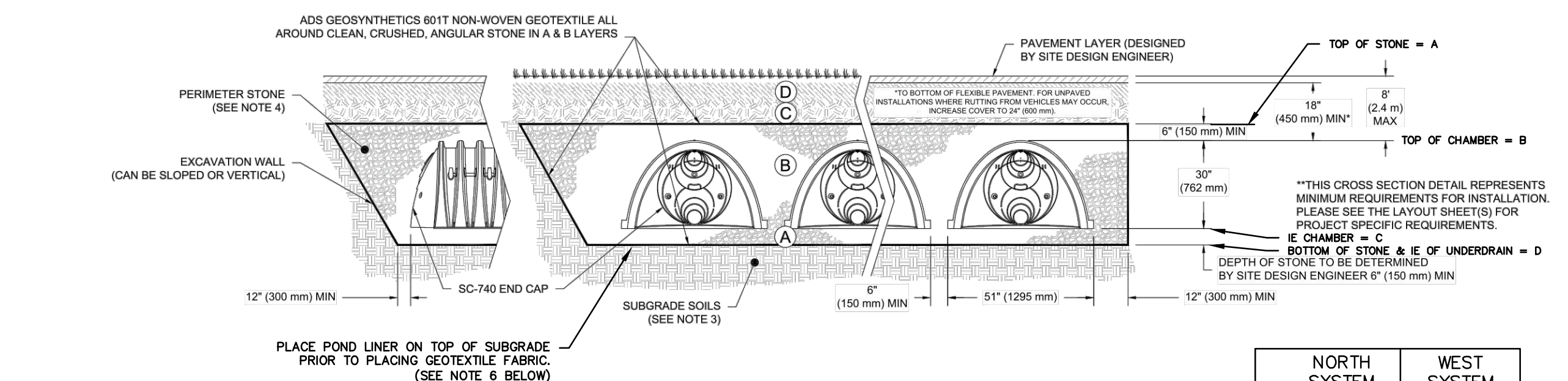
Waukesha Genesis
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ACCEPTABLE FILL MATERIALS: STORMTECH SC-740 CHAMBER SYSTEMS

MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	FINAL FILL: FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 18" (450 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	AASHTO M145 ¹ A-1, A-2-4, A-3 OR AASHTO M43 ¹ 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 12" (300 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" (150 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL-GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 lbs (55 kN). DYNAMIC FORCE NOT TO EXCEED 20,000 lbs (89 kN).
B	EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	AASHTO M43 ¹ 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
A	FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	AASHTO M43 ¹ 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. ^{2,3}

- PLEASE NOTE:
 1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE."
 2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6" (150 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
 3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
 4. ONCE LAYER 'C' IS PLACED, ANY SOIL MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.



	NORTH SYSTEM	WEST SYSTEM
A	97.00	98.11
B	96.50	97.61
C	94.00	95.11
D	93.50	94.61

NOTES:

- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- SC-740 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
- PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
- REQUIREMENTS FOR HANDLING AND INSTALLATION:
 - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
 - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 2".
 - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 550 LBS/FT². AND (b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.
- PLACE 40 MIL (HDPE) POND AND CANAL LINER OR EQUAL ON SUBGRADE EXTENDING THE ENTIRE EXCAVATED AREA AND UP EXCAVATED WALLS ONE FOOT PRIOR TO PLACING GEOSYNTHETIC FABRIC.

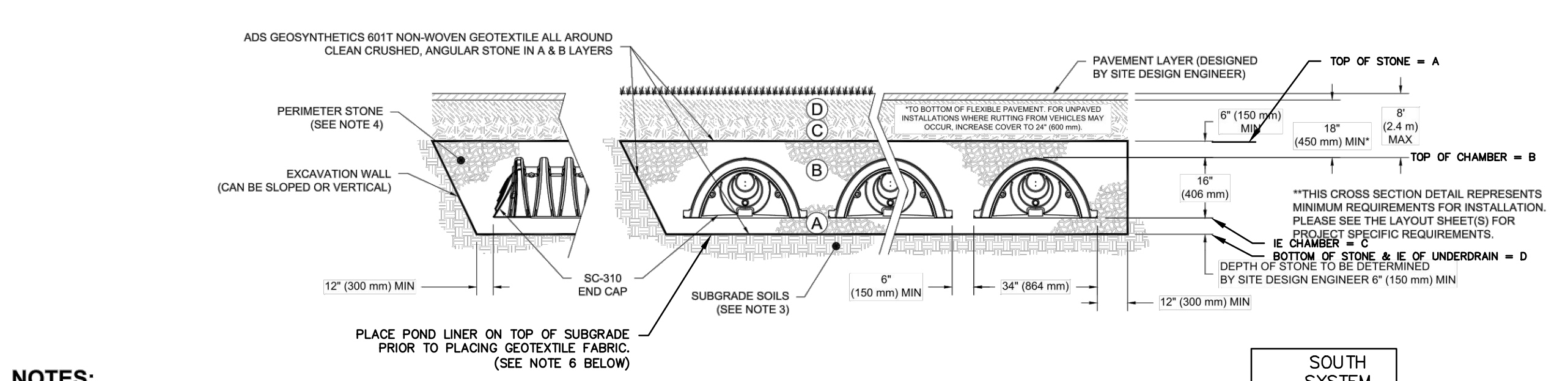
Waukesha Genesis
StormTech Chamber System
 4840 TREUMAN BLVD HILLIARD, OH 43026
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 DATE: 07/19/22 DRAWN: MPV CHECKED: JRS

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ACCEPTABLE FILL MATERIALS: STORMTECH SC-310 CHAMBER SYSTEMS

MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	FINAL FILL: FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 18" (450 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	AASHTO M145 ¹ A-1, A-2-4, A-3 OR AASHTO M43 ¹ 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 12" (300 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" (150 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL-GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 lbs (55 kN). DYNAMIC FORCE NOT TO EXCEED 20,000 lbs (89 kN).
B	EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	AASHTO M43 ¹ 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
A	FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	AASHTO M43 ¹ 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. ^{2,3}

- PLEASE NOTE:
 1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE."
 2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6" (150 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
 3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
 4. ONCE LAYER 'C' IS PLACED, ANY SOIL MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.



	SOUTH SYSTEM
A	97.43
B	96.93
C	95.60
D	95.10

NOTES:

- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2922 (POLETHYLENE) OR ASTM F2418 (POLYPROPYLENE), "STANDARD SPECIFICATION FOR CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- SC-310 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
- PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
- REQUIREMENTS FOR HANDLING AND INSTALLATION:
 - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
 - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 2".
 - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2922 SHALL BE GREATER THAN OR EQUAL TO 400 LBS/FT². AND (b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.
- PLACE 40 MIL (HDPE) POND AND CANAL LINER OR EQUAL ON SUBGRADE EXTENDING THE ENTIRE EXCAVATED AREA AND UP EXCAVATED WALLS ONE FOOT PRIOR TO PLACING GEOSYNTHETIC FABRIC.

Waukesha Genesis
StormTech Chamber System
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Waukesha Genesis
 16745 W. Bluemound Road
 Brookfield, WI 53005-5938
 (262) 781-1000
 rasmith.com
 CREATIVITY BEYOND ENGINEERING

Brookfield, WI | Milwaukee, WI | Appleton, WI | Madison, WI
 Cedarburg, WI | Naperville, IL | Irvine, CA

Waukesha Genesis
CITY OF WAUKESHA, WISCONSIN
UNDERGROUND STORAGE DETAILS

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 R.A. Smith, Inc.
 DATE: 09/23/2022
 SCALE: N.T.S.
 JOB NO. 3210204.01
 PROJECT MANAGER:
 RYAN J. LANCOUR, P.E.
 DESIGNED BY: JJJ
 CHECKED BY: RJL
SHEET NUMBER
 C504

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SC-740 ISOLATOR ROW PLUS DETAIL
NTS

INSPECTION & MAINTENANCE

STEP 1) INSPECT ISOLATOR ROW PLUS FOR SEDIMENT

A. INSPECTION PORTS (IF PRESENT)

A.1. REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN

A.2. REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED

A.3. USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG

A.4. LOWER A CAMERA INTO ISOLATOR ROW PLUS FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)

A.5. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.

B. ALL ISOLATOR PLUS ROWS

B.1. REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW PLUS

B.2. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW PLUS THROUGH OUTLET PIPE

i) MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY

ii) FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE

B.3. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.

STEP 2) CLEAN OUT ISOLATOR ROW PLUS USING THE JETVAC PROCESS

A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45° (1.1 m) OR MORE IS PREFERRED

B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN

C. VACUUM STRUCTURE SUMP AS REQUIRED

STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.

STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

NOTES

1. INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.

2. CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.

4" PVC INSPECTION PORT DETAIL (SC SERIES CHAMBER)
NTS

NOTE: INSPECTION PORTS MAY BE CONNECTED THROUGH ANY CHAMBER CORRUGATION CREST.

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SC-310 ISOLATOR ROW PLUS DETAIL
NTS

INSPECTION & MAINTENANCE

STEP 1) INSPECT ISOLATOR ROW PLUS FOR SEDIMENT

A. INSPECTION PORTS (IF PRESENT)

A.1. REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN

A.2. REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED

A.3. USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG

A.4. LOWER A CAMERA INTO ISOLATOR ROW PLUS FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)

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B. ALL ISOLATOR PLUS ROWS

B.1. REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW PLUS

B.2. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW PLUS THROUGH OUTLET PIPE

i) MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY

ii) FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE

B.3. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.

STEP 2) CLEAN OUT ISOLATOR ROW PLUS USING THE JETVAC PROCESS

A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45° (1.1 m) OR MORE IS PREFERRED

B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN

C. VACUUM STRUCTURE SUMP AS REQUIRED

STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.

STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

NOTES

1. INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.

2. CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.

4" PVC INSPECTION PORT DETAIL (SC SERIES CHAMBER)
NTS

NOTE: INSPECTION PORTS MAY BE CONNECTED THROUGH ANY CHAMBER CORRUGATION CREST.

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SC-740 TECHNICAL SPECIFICATION
NTS

SC-310 TECHNICAL SPECIFICATION
NTS

NOMINAL CHAMBER SPECIFICATIONS

PART #	STUB	A	B	C
SC740PE001 / SC740PE01PC	6" (150 mm)	10.9" (277 mm)	18.5" (470 mm)	0.5" (13 mm)
SC740PE008 / SC740PE08PC	8" (200 mm)	12.2" (310 mm)	16.5" (419 mm)	0.8" (15 mm)
SC740PE010 / SC740PE10PC	10" (250 mm)	13.4" (340 mm)	14.5" (368 mm)	0.7" (18 mm)
SC740PE012 / SC740PE12PC	12" (300 mm)	14.7" (373 mm)	12.5" (318 mm)	1.2" (30 mm)
SC740PE018 / SC740PE18PC	15" (375 mm)	18.4" (467 mm)	9.0" (229 mm)	1.3" (33 mm)
SC740PE024 / SC740PE24PC	18" (450 mm)	19.7" (500 mm)	5.0" (127 mm)	1.6" (41 mm)
SC740PE030 / SC740PE30PC	24" (600 mm)	18.5" (470 mm)	0.1" (3 mm)	0.9" (23 mm)

UNDERDRAIN DETAIL
NTS

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888-892-2884 | WWW.STORMTECH.COM

NYLOPLAST DRAIN BASIN
NTS

UNDERDRAIN DETAIL
NTS

NOTES

- 8-30" (200-750 mm) GRATES/SOLID COVERS SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05
- 12-30" (300-750 mm) FRAMES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05
- DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS
- DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS & HANCOCK DUAL WALL) & SDR 35 PVC
- FOR COMPLETE DESIGN AND PRODUCT INFORMATION: WWW.NYLOPLAST-US.COM
- TO ORDER CALL: 800-821-6710

A	PART #	GRATE/SOLID COVER OPTIONS
8" (200 mm)	2808AG	PEDESTRIAN LIGHT DUTY STANDARD LIGHT DUTY SOLID LIGHT DUTY
10" (250 mm)	2810AG	PEDESTRIAN LIGHT DUTY STANDARD LIGHT DUTY SOLID LIGHT DUTY
12" (300 mm)	2812AG	PEDESTRIAN AASHTO H-10 STANDARD AASHTO H-20 SOLID AASHTO H-20
15" (375 mm)	2815AG	PEDESTRIAN AASHTO H-10 STANDARD AASHTO H-20 SOLID AASHTO H-20
18" (450 mm)	2818AG	PEDESTRIAN AASHTO H-10 STANDARD AASHTO H-20 SOLID AASHTO H-20
24" (600 mm)	2824AG	PEDESTRIAN AASHTO H-10 STANDARD AASHTO H-20 SOLID AASHTO H-20
30" (750 mm)	2830AG	PEDESTRIAN AASHTO H-20 STANDARD AASHTO H-20 SOLID AASHTO H-20

Waukesha Genesis
Nyloplast®
4640 TRUMAN BLVD HILLIARD, OH 43026
888-892-2884 | WWW.NYLOPLAST-US.COM

DESCRIPTION

DATE

16745 W. Bluemound Road
Brookfield, WI 53005-5938
(262) 781-1000
rasmith.com

raSmith
CREATIVITY BEYOND ENGINEERING

Brookfield, WI | Milwaukee, WI | Appleton, WI | Madison, WI
Cedarburg, WI | Naperville, IL | Irvine, CA

Waukesha Genesis
CITY OF WAUKESHA, WISCONSIN
UNDERGROUND STORAGE DETAILS

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R.A. Smith, Inc.
DATE: 09/23/2022
SCALE: N.T.S.
JOB NO. 3210204.01
PROJECT MANAGER:
RYAN J. LANCOUR, P.E.
DESIGNED BY: JJJ
CHECKED BY: RJL
SHEET NUMBER
C505

DIVISION 1 – GENERAL REQUIREMENTS

01 41 00 – REGULATORY REQUIREMENTS

- 1. THE LATEST EDITIONS OF THE FOLLOWING DOCUMENTS AND ANY SUPPLEMENTS THERETO, SHALL GOVERN ALL CONSTRUCTION ITEMS ON THIS PLAN UNLESS OTHERWISE NOTED:
a. WISCONSIN DEPARTMENT OF NATURAL RESOURCES (DNR) STORM WATER TECHNICAL STANDARDS
b. WISCONSIN EROSION CONTROL PRODUCT ACCEPTABILITY LIST
c. STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN (SSSWCW)
d. WISCONSIN ADMINISTRATIVE CODE, SECTIONS SPS 382-387
e. WISCONSIN DEPARTMENT OF TRANSPORTATION (WISDOT) STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION
f. FEDERAL HIGHWAY ADMINISTRATION MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD)
g. WISCONSIN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (WMUTCD)
h. UNITED STATES DEPARTMENT OF JUSTICE ADA STANDARDS
i. UNITED STATES DEPARTMENT OF TRANSPORTATION ADA STANDARDS FOR TRANSPORTATION FACILITIES
j. MUNICIPALITY DEVELOPMENT STANDARDS
k. COUNTY DEVELOPMENT STANDARDS
2. THE OWNER, ENGINEER AND MUNICIPALITY SHALL BE NOTIFIED AT LEAST 48 HOURS IN ADVANCE OF PERFORMING ANY CONSTRUCTION ACTIVITIES...
3. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING COPIES OF ALL PERMITS AND FOR ABIDING BY ALL PERMIT REQUIREMENTS AND RESTRICTIONS.
4. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR COMPLYING WITH ALL FEDERAL, STATE, AND LOCAL SAFETY REQUIREMENTS TOGETHER WITH EXERCISING PRECAUTIONS AT ALL TIMES FOR THE PROTECTION OF PERSONS (INCLUDING EMPLOYEES) AND PROPERTY.
5. SHOP DRAWINGS AND/OR MANUFACTURER'S PRODUCT DATA SUBMITTALS ARE REQUIRED ONLY IF THE PRODUCT OR METHOD OF CONSTRUCTION IS DIFFERENT FROM THAT SPECIFIED OR IF REQUIRED BY THE MUNICIPAL ENGINEER.
6. ALL DOCUMENTS SUBMITTED FOR REVIEW SHALL HAVE THE SPECIFIC MATERIAL, PART, SIZE, ETC. HIGHLIGHTED IN SOME FASHION...
7. THE CONTRACTOR SHALL SUBMIT AN ORIGINAL COPY AND AN ENLARGED COPY TO HOW THE SUBSTITUTION MEETS THE PROPOSED DESIGN...
8. ALL WORK SHALL BE DONE IN COMPLIANCE WITH THE CONTRACT DOCUMENTS. THE OWNER OR HIS REPRESENTATIVE SHALL BE SOLELY RESPONSIBLE FOR THE QUALITY AND ACCEPTABILITY OF MATERIALS FURNISHED, WORK PERFORMED, AND WORKMANSHIP.
9. FAILURE OR NEGLIGENCE ON THE PART OF THE OWNER OR HIS REPRESENTATIVE TO CONDEMN OR REJECT SUBSTANDARD OR INTERIOR WORK OR MATERIALS SHALL NOT BE CONSIDERED TO IMPLY AN ACCEPTANCE OF SUCH WORK OR MATERIALS...
10. INSPECTORS EMPLOYED BY THE OWNER SHALL BE AUTHORIZED TO INSPECT ALL WORK DONE AND ALL MATERIAL FURNISHED...
11. ALL WORKMANSHIP SHALL CONFORM TO THE BEST STANDARD PRACTICE...
12. ALL EXPOSED ITEMS OF WORK SHALL PRESENT A NEAT WORKMANLIKE APPEARANCE AND SHALL BE AS TRUE TO SHAPE AND ALIGNMENT AS POSSIBLE...
13. ALL MATERIALS AND WORKMANSHIP NOT CONFORMING TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS SHALL BE REJECTED...
14. AT THE COMPLETION OF THE WORK AND PRIOR TO FINAL PAYMENT, THE CONTRACTOR SHALL PROVIDE THE OWNER OR HIS REPRESENTATIVE WITH A MARKED-UP SET OF DRAWINGS SHOWING ALL CHANGES OR VARIATIONS FROM THE ORIGINAL DRAWINGS...
15. CAREFUL MEASUREMENTS SHALL BE MADE TO LOCATE UNDERGROUND EXTERIOR AND UNDERGROUND INTERIOR SEWERS, GAS LINES, WATER LINES, ELECTRICAL CONDUIT AND MISCELLANEOUS PIPING.
16. THE CONTRACTOR IS RESPONSIBLE FOR ALL TRAFFIC CONTROL, TRAFFIC CONTROL PLANS AND PERMITTING FOR ALL WORK TO BE COMPLETED ON-SITE OR IN THE PUBLIC RIGHT-OF-WAY.

01 70 00 – EXECUTION & CLOSEOUT REQUIREMENTS

- 1. THE CONTRACTOR IS RESPONSIBLE FOR EXAMINING ALL EXISTING SITE CONDITIONS PRIOR TO COMMENCEMENT OF CONSTRUCTION AND SHALL COMPARE WITH THIS PLAN.
2. EXISTING UTILITY INFORMATION IS PROVIDED FOR INFORMATIONAL PURPOSES ONLY, BASED ON BEST AVAILABLE PUBLIC RECORDS, AS-BUILT DRAWINGS, AND FIELD OBSERVATIONS...
3. THE CONTRACTOR SHALL VERIFY ALL LOCATIONS, ELEVATIONS, AND SIZES OF EXISTING UTILITIES AND SHALL CHECK ALL PROPOSED UTILITY CONNECTIONS AND CROSSINGS PRIOR TO PROCEEDING WITH ANY WORK...
4. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING SOIL CONDITIONS PRIOR TO COMMENCEMENT OF CONSTRUCTION. A GEOTECHNICAL REPORT MAY BE AVAILABLE FROM THE OWNER...
5. THE CONTRACTOR SHALL FIELD VERIFY ELEVATIONS OF THE BENCHMARKS AND HORIZONTAL CONTROL BY REFERENCING TO KNOWN CORNER POINTS AND PROPERTY LINES...
6. SURVEY BENCHMARKS AND CONTROL POINTS SHALL BE MAINTAINED AND PROTECTED FROM DISTURBANCE. PROPERTY CORNERS SHALL BE CAREFULLY PROTECTED AT ALL TIMES...
7. CONTRACTOR OPERATIONS SHALL BE REGULATED AT THE CONTRACTOR'S EXPENSE...
8. ANY ADJACENT PROPERTIES OR ROAD RIGHT-OF-WAYS WHICH ARE DAMAGED DURING CONSTRUCTION SHALL BE RESTORED BY THE CONTRACTOR...
9. PUBLIC ROADS SHALL NOT BE FULLY CLOSED TO TRAFFIC AT ANY TIME...
10. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR DETERMINING QUANTITIES, SHALL BID ON THEIR OWN ESTIMATE OF THE WORK REQUIRED...
11. REQUESTS FOR CLARIFICATION WILL BE INTERPRETED BY THE OWNER/ENGINEER PRIOR TO AWARD OF CONTRACT...
12. SHOULD ANY DISCREPANCIES BE DISCOVERED BY THE CONTRACTOR AFTER AWARD OF CONTRACT, NOTIFY OWNER/ENGINEER IN WRITING IMMEDIATELY...
13. ALL WORK SHALL BE GUARANTEED BY THE CONTRACTOR FOR A MINIMUM PERIOD OF 12 MONTHS FROM THE DATE OF FINAL ACCEPTANCE...
14. THE CONTRACTOR SHALL INDEMNIFY THE OWNER, THE ENGINEER, AND THE MUNICIPALITY, THEIR AGENTS, ETC., FROM ALL LIABILITY INVOLVED WITH THE CONSTRUCTION, INSTALLATION, AND TESTING OF THE WORK ON THIS PROJECT.

DIVISION 31 – EARTHWORK

31 10 00 – SITE CLEARING & DEMOLITION

- 1. WORK SHALL CONSIST OF DEMOLITION, ABANDONMENT, AND REMOVAL OF EXISTING FOUNDATIONS, WALLS, SLABS, FENCES, PIPING, PAVEMENTS, AND OTHER MANMADE ITEMS INTERFERING WITH NEW CONSTRUCTION...
2. ALL ITEMS SHALL INCLUDE ALL NECESSARY MATERIALS AND LABOR TO COMPLETE THE ITEM IN PLACE.
3. CALL 811 TO NOTIFY UTILITY PROVIDERS AND REQUEST FIELD LOCATION OF EXISTING UTILITIES WITHIN PROJECT LIMITS PRIOR TO ANY CONSTRUCTION RELATED ACTIVITY.
4. CLEARLY IDENTIFY ALL VEGETATION TO BE PRESERVED AND/OR RELOCATED PRIOR TO CLEARING AND GRUBBING.
5. PROTECT EXISTING IMPROVEMENTS TO REMAIN DURING CONSTRUCTION...
6. REMOVE AND RELOCATE ABOVE-GRADE AND BELOW-GRADE IMPROVEMENTS AS INDICATED AND AS NECESSARY TO CONSTRUCT PROPOSED IMPROVEMENTS.
7. SAWCUT ALL PAVEMENT TO BE REMOVED IN STRAIGHT LINES TO FULL DEPTH.
8. REMOVE CONCRETE AND MASONRY IN SMALL SECTIONS...
9. DISCONNECT AND SEAL/CAP EXISTING UTILITIES TO BE REMOVED, RELOCATED, OR ABANDONED...
10. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING OWNERSHIP OF AND COORDINATING NECESSARY REMOVAL AND/OR RELOCATION OF ALL EXISTING UTILITIES WITHIN THE PROJECT LIMITS.
11. DO NOT INTERRUPT UTILITY SERVICE TO EXISTING FACILITIES UNLESS PERMITTED BY THE OWNER.
12. VOIDS LEFT BY REMOVALS SHALL BE LEVELLED TO PREVENT PONDING OF WATER.
13. REMOVE AND LEGALLY DISPOSE OF DEMOLISHED MATERIALS, TRASH, AND DEBRIS FROM THE PROJECT SITE.

31 20 00 – EARTH MOVING

- 1. WORK SHALL CONSIST OF STRIPPING AND STORAGE OF TOPSOIL, EXCAVATION, EMBANKMENT, IMPORTING OR EXPORTING MATERIAL TO ACHIEVE LAND BALANCE, COMPACTION, FINISH GRADING, SUBGRADE PREPARATION, AND REPLACEMENT OF TOPSOIL.
2. ALL ITEMS SHALL INCLUDE ALL NECESSARY MATERIALS AND LABOR TO COMPLETE THE ITEM IN PLACE.
3. ALL EARTHWORK SHALL BE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT AND APPLYING AN ACCEPTABLE ENGINEER'S DESIGN.
4. EXCAVATE TO SUBGRADE REGARDLESS OF THE CHARACTER OF SURFACE AND SUBSURFACE CONDITIONS ENCOUNTERED.
5. EXISTING FOUNDATIONS, BUILDING REMNANTS, AND UNSATISFACTORY MATERIAL SHALL BE COMPLETELY REMOVED FROM WITHIN AND A MINIMUM OF 10 FEET BEYOND BUILDING PAD AREAS...
6. EXISTING FOUNDATIONS, BUILDING REMNANTS, AND UNSATISFACTORY MATERIAL SHALL BE REMOVED TO A MINIMUM OF 2 FEET BELOW PROPOSED SUBGRADE WITHIN GREENSPACE AND PAVEMENT AREAS...
7. AREAS SHALL BE REFINISHED TO WITHIN 1 INCH, MORE OR LESS, OF PROPOSED SUBGRADE...
8. DISKING, HARROWING, AND AERATION TECHNIQUES SHALL BE USED TO DRY SUBGRADE PRIOR TO PROOF ROLLING.
9. AREAS SHALL BE PROTECTED FROM ENTERING EXCAVATIONS, PONDING ON PREPARED SUBGRADES, AND FLOODING PROJECT SITE AND/OR SURROUNDING AREAS.
10. THE CONTRACTOR SHALL ASSUME SOLE RESPONSIBILITY FOR ALL EARTHWORK COMPUTATIONS AND FOR ACTUAL LAND BALANCE, INCLUDING UTILITY TRENCH SPOIL...
11. TOPSOIL REPLACEMENT DEPTH SHALL BE AS CALLED OUT ON THE CIVIL OR LANDSCAPE PLANS...
12. TOPSOIL REPLACEMENT DEPTH SHALL BE AS CALLED OUT ON THE CIVIL OR LANDSCAPE PLANS, OR A MINIMUM OF FOUR INCHES IF NOT CALLED OUT ON LANDSCAPE PLAN.

31 25 00 – EROSION & SEDIMENTATION CONTROLS

- 1. WORK SHALL CONSIST OF INSTALLATION OF TEMPORARY AND PERMANENT PRACTICES FOR SEDIMENTATION CONTROL, EROSION CONTROL, AND TRAFFIC CONTROL PRACTICES THROUGHOUT THE PROJECT SITE.
2. ALL ITEMS SHALL INCLUDE ALL NECESSARY MATERIALS AND LABOR TO COMPLETE THE ITEM IN PLACE.
3. INSTALLATION AND MAINTENANCE OF PRACTICES SHALL BE IN ACCORDANCE WITH THE APPLICABLE WORK TECHNICAL STANDARD, OR THE WISCONSIN CONSTRUCTION SITE BEST MANAGEMENT PRACTICE HANDBOOK IF A TECHNICAL STANDARD IS NOT AVAILABLE.
4. ALL PRACTICES SHALL BE INSTALLED PRIOR TO COMMENCING ANY LAND DISTURBING CONSTRUCTION RELATED ACTIVITY.
5. CONFORMANCE WITH PERMIT REQUIREMENTS.
6. ALL PRACTICES SHALL BE ROUTINELY INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL GREATER THAN 0.5 INCHES.
7. ALL DISTURBED AREAS SHALL DRAIN TO A CONTROL PRACTICE AT ALL TIMES DURING CONSTRUCTION UNTIL FINAL STABILIZATION IS ACHIEVED.
8. ALL DISTURBED GRASSLAND LEFT INACTIVE FOR 7 DAYS SHALL BE STABILIZED WITH A TEMPORARY SEED MIXTURE AND MULCH.
9. DISTURBED AREAS THAT CAN NOT BE STABILIZED WITH A DENSE GROWTH OF VEGETATION DUE TO TEMPERATURE OR TIMING OF WORK SHALL BE STABILIZED BY APPLYING ANIONIC POLYACRYLAMIDE (PAM).
10. ALL ACTIVITIES ON THE PROJECT SITE SHALL BE CONDUCTED IN A LOGICAL SEQUENCE TO MINIMIZE THE AREA OF BARE SOIL EXPOSED AT ANY ONE TIME.
11. DUST GENERATED BY CONSTRUCTION RELATED ACTIVITIES SHALL BE MINIMIZED BY USE OF WATERING, CALCIUM CHLORIDE TREATMENT, CONSTRUCTION SCHEDULING, OR OTHER APPROPRIATE MEASURES.
12. THE CONTRACTOR SHALL BE PREPARED FOR DEWATERING CONDITIONS BY HAVING APPROPRIATE PUMPS AND FILTER BAGS ON-SITE.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE CLEANLINESS OF THE PROJECT SITE AND PUBLIC ROADS DURING CONSTRUCTION.
14. FINAL STABILIZATION OF THE PROJECT SITE SHALL BE IN ACCORDANCE WITH THE APPROVED LANDSCAPE PLAN.
15. ALL SEEDED AREAS SHALL BE FERTILIZED, RESEED, AND MULCHED IN ACCORDANCE WITH THE APPROVED LANDSCAPE PLAN TO MAINTAIN A VIGOROUS DENSE VEGETATIVE COVER.

DIVISION 32 – EXTERIOR IMPROVEMENTS

32 12 00 – ASPHALT PAVING

- 1. WORK SHALL CONSIST OF FINE GRADING SUBGRADE, EXCAVATION BELOW SUBGRADE (IF NECESSARY), PLACEMENT OF CRUSHED STONE BASE, INSTALLATION OF HOT-MIX ASPHALT, PAVEMENT MARKING, SIGNAGE, AND CLEANUP.
2. ALL ITEMS SHALL INCLUDE ALL NECESSARY MATERIALS AND LABOR TO COMPLETE THE ITEM IN PLACE.
3. CRUSHED STONE BASE SHALL BE IN ACCORDANCE WITH SECTION 305 OF WISDOT STANDARD SPECIFICATIONS.
4. ASPHALTIC MATERIALS SHALL BE IN ACCORDANCE WITH SECTION 455 OF WISDOT STANDARD SPECIFICATIONS.
5. AGGREGATE SHALL BE IN ACCORDANCE WITH SECTION 460 OF WISDOT STANDARD SPECIFICATIONS.
6. DO NOT CONDUCT ASPHALT PAVING IF ANY OF THE FOLLOWING CONDITIONS EXIST: CRUSHED STONE BASE IS WET OR EXCESSIVELY DAMP; TEMPERATURE IS BELOW 30 DEGREES FAHRENHEIT AT TIME OF BINDER COURSE APPLICATION; TEMPERATURE HAS BEEN BELOW 35 DEGREES FAHRENHEIT WITHIN 12 HOURS PRIOR TO TACK COAT APPLICATION; TEMPERATURE IS BELOW 40 DEGREES FAHRENHEIT AT TIME OF SURFACE COURSE INSTALLATION.
7. COMPACT ASPHALT IN ACCORDANCE WITH SECTION 450 OF WISDOT STANDARD SPECIFICATIONS.
8. ASPHALT TO PRODUCE THE THICKNESS INDICATED WITHIN PLUS/MINUS 1/4-INCH FOR BINDER COURSE, AND WITHIN PLUS 1/4-INCH FOR SURFACE COURSE (NO MINUS).
9. APPLY TACK COAT BETWEEN ASPHALT LAYERS AT A MINIMUM RATE OF 0.25 GAL/SY.
10. NO TRAFFIC SHALL BE ALLOWED ON ASPHALT AFTER FINAL ROLLING UNTIL IT HAS COOLED AND HARDENED.
11. FINAL ASPHALT SURFACE SHALL BE WITHIN A 1/8-INCH TOLERANCE AS DETERMINED BY USING A 10-FOOT STRAIGHTEDGE APPLIED LONGITUDINALLY OR TRANSVERSELY.
12. A SLOPE NO GREATER THAN 2% IN ALL DIRECTIONS AT ADA PARKING STALLS AND ADJACENT UNLOADING AREAS IS REQUIRED.
13. A SLOPE NO GREATER THAN 2% ACROSS THE WIDTH OF THE ACCESSIBLE ROUTE IS REQUIRED.

32 13 00 – CONCRETE PAVING

- 1. WORK SHALL CONSIST OF FINE GRADING SUBGRADE, EXCAVATION BELOW SUBGRADE (IF NECESSARY), PLACEMENT OF CRUSHED STONE BASE, INSTALLATION OF CONCRETE, AND CLEANUP.
2. ALL ITEMS SHALL INCLUDE ALL NECESSARY MATERIALS AND LABOR TO COMPLETE THE ITEM IN PLACE.
3. CRUSHED STONE BASE SHALL BE IN ACCORDANCE WITH SECTION 305 OF WISDOT STANDARD SPECIFICATIONS.
4. CONCRETE SHALL BE GRADE A AIR-ENTRAINED IN ACCORDANCE WITH SECTION 501 OF WISDOT STANDARD SPECIFICATIONS.
5. AGGREGATE SHALL BE IN ACCORDANCE WITH SECTION 501 OF WISDOT STANDARD SPECIFICATIONS.
6. WATER SHALL BE IN ACCORDANCE WITH SECTION 501 OF WISDOT STANDARD SPECIFICATIONS AND ASTM C94 / C94M.
7. AIR-ENTRAINING SHALL BE IN ACCORDANCE WITH SECTION 501 OF WISDOT STANDARD SPECIFICATIONS AND ASTM C260.
8. LIQUID CURING COMPOUND SHALL BE IN ACCORDANCE WITH SECTION 415 OF WISDOT STANDARD SPECIFICATIONS AND ASHTO M 287.
9. CURBING SHALL BE IN ACCORDANCE WITH SECTION 601 OF WISDOT STANDARD SPECIFICATIONS.
10. SIDEWALK AND PATIO SHALL BE IN ACCORDANCE WITH SECTION 602 OF WISDOT STANDARD SPECIFICATIONS.
11. CONCRETE FORMS SHALL REMAIN IN PLACE AT LEAST 24 HOURS AFTER CONCRETE INSTALLATION AND SHALL BE CLEANED AFTER EACH USE.
12. CONSTRUCTION AND CONTRACTION JOINTS SHALL BE IN ACCORDANCE WITH SECTION 415 OF WISDOT STANDARD SPECIFICATIONS.
13. ISOLATION JOINTS SHALL CONSIST OF PREFORMED JOINT FILLER STRIPS ABUTTING CURBING, INLETS, CATCH BASINS, MANHOLES, STRUCTURES, AND OTHER FIXED OBJECTS.

DIVISION 32 – EXTERIOR IMPROVEMENTS

- 14. EDGES OF CONCRETE PAVEMENT, CURBING, SIDEWALK, PATIOS, AND JOINTS SHALL BE TOOLED IN CONCRETE AFTER INITIAL FLOATING WITH AN EDGING TOOL TO A 1/4-INCH RADIUS.
15. FINISH, CURE, AND PROTECT CURBING IN ACCORDANCE WITH SECTION 601 OF WISDOT STANDARD SPECIFICATIONS.
16. FINISH (LIGHT BROOM), CURE, AND PROTECT SIDEWALK AND PATIOS IN ACCORDANCE WITH SECTION 602 OF WISDOT STANDARD SPECIFICATIONS.
17. FINISH (ARTIFICIAL TURF DRAG), CURE, AND PROTECT VEHICULAR PAVEMENT AND PADS IN ACCORDANCE WITH SECTION 415 OF WISDOT STANDARD SPECIFICATIONS.
18. MAINTAIN CONCRETE FREE OF STAINS, DISCOLORATION, DIRT, AND OTHER FOREIGN MATERIAL.
19. MAXIMUM DIFFERENCE BETWEEN CONCRETE SIDEWALKS AND ADJACENT PAVED SURFACES SHALL NOT EXCEED 1/4-INCH VERTICAL.
20. A SLOPE NO GREATER THAN 2% IN ALL DIRECTIONS AT ADA PARKING STALLS AND ADJACENT UNLOADING AREAS IS REQUIRED.
21. A SLOPE NO GREATER THAN 5% ALONG THE LENGTH OF THE ACCESSIBLE ROUTE IS REQUIRED.
22. ALL HANDICAP ACCESSIBLE DOORWAYS REQUIRE AN EXTERIOR LANDING THAT IS A MINIMUM OF 5 FEET BY 5 FEET WITH A SLOPE NO GREATER THAN 2% IN ALL DIRECTIONS.
23. REMOVE AND REPLACE CONCRETE THAT IS BROKEN, DAMAGED, DEFECTIVE, OR DOES NOT COMPLY WITH THE REQUIREMENTS LISTED ABOVE.

32 17 00 – PAVEMENT MARKING & SIGNAGE

- 1. WORK SHALL CONSIST OF INSTALLATION OF PARKING LOT STRIPING, DIRECTION ARROWS, HANDICAP ACCESSIBLE SYMBOLS AND SITE SIGNAGE.
2. ALL ITEMS SHALL INCLUDE ALL NECESSARY MATERIALS AND LABOR TO COMPLETE THE ITEM IN PLACE.
3. PAVEMENT MARKING PAINT SHALL BE IN ACCORDANCE WITH SECTION 646 OF WISDOT STANDARD SPECIFICATIONS AND WISDOT APPROVED PRODUCTS LIST.
4. BARRICADE WORK AREA DURING INSTALLATION AND UNTIL PAVEMENT MARKING PAINT IS DRIED.
5. AREAS SHALL BE PROTECTED FROM ENTERING EXCAVATIONS, PONDING ON PREPARED SUBGRADES, AND FLOODING PROJECT SITE AND/OR SURROUNDING AREAS.
6. THE CONTRACTOR SHALL ASSUME SOLE RESPONSIBILITY FOR ALL EARTHWORK COMPUTATIONS AND FOR ACTUAL LAND BALANCE, INCLUDING UTILITY TRENCH SPOIL.
7. TOPSOIL REPLACEMENT DEPTH SHALL BE AS CALLED OUT ON THE CIVIL OR LANDSCAPE PLANS, OR A MINIMUM OF FOUR INCHES IF NOT CALLED OUT ON LANDSCAPE PLAN.

32 32 00 – RETAINING WALLS

- 1. WORK SHALL CONSIST OF FURNISHING DETAILED DESIGN, MATERIALS, LABOR, EQUIPMENT, SUPERVISION, AND DIRECTION TO CONSTRUCT RETAINING WALL SYSTEMS IN REASONABLY CLOSE CONFORMITY TO THE LINES, GRADES, AND DIMENSIONS SHOWN ON THIS PLAN.
2. ALL ITEMS SHALL INCLUDE ALL NECESSARY MATERIALS AND LABOR TO COMPLETE THE ITEM IN PLACE.
3. THE CONTRACTOR SHALL SECURE DETAILED DESIGN CALCULATIONS AND DRAWINGS, PREPARED AND SEALED BY A PROFESSIONAL ENGINEER EXPERIENCED WITH RETAINING WALL DESIGN AND LICENSED IN THE STATE IN WHICH THE RETAINING WALLS ARE TO BE CONSTRUCTED.
4. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL SURROUNDING STRUCTURES AND UTILITIES ARE PROTECTED FROM THE EFFECTS OF EXCAVATION AND PROVIDING ANY NECESSARY EXCAVATION SUPPORT.
5. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL SURROUNDING STRUCTURES AND UTILITIES DOES NOT DISTURB OR PLACE TEMPORARY LOADS ON THE RETAINING WALLS THAT EXCEED DESIGN LOADS.

DIVISION 33 – UTILITIES

33 10 00 – WATER DISTRIBUTION

- 1. WORK SHALL CONSIST OF INSTALLATION AND TESTING OF THE WATER DISTRIBUTION SYSTEM AND ALL APPURTENANCES.
2. ALL ITEMS SHALL INCLUDE ALL NECESSARY MATERIALS AND LABOR TO COMPLETE THE ITEM IN PLACE.
3. ALL PUBLIC WATER DISTRIBUTION WORK SHALL BE IN ACCORDANCE WITH SSSWCW AND MUNICIPALITY DEVELOPMENT STANDARDS.
4. ALL PRIVATE WATER DISTRIBUTION WORK SHALL BE IN ACCORDANCE WITH WISCONSIN ADMINISTRATIVE CODE AND MUNICIPALITY DEVELOPMENT STANDARDS.
5. POLYETHYLENE TUBING SHALL BE SDR 18, CLASS 150 CONFORMING TO ANWWA C900 WITH INTEGRAL ELASTOMERIC BELL AND SPIGOT JOINTS IN ACCORDANCE WITH SECTION 8.2.0 OF SSSWCW.
6. DUCTILE IRON PIPE (DIP) SHALL BE CLASS 150 CONFORMING TO ANWWA C151 WITH RUBBER GASKETED JOINTS IN ACCORDANCE WITH SECTION 8.1.8 OF SSSWCW.
7. POLYETHYLENE TUBING SHALL BE SDR 9 IN ACCORDANCE WITH SECTION 8.2.4 OF SSSWCW AND CONFORM TO ANWWA C901.
8. COPPER TUBING SHALL BE TYPE "K" IN ACCORDANCE WITH SECTION 8.2.4.0 OF SSSWCW AND CONFORM TO ASTM B88.
9. BALL VALVES SHALL BE IN ACCORDANCE WITH SECTION 8.3.0.0 OF SSSWCW AND CONFORM TO ANWWA C800 AND ASTM AS NEEDED.
10. GATE VALVES SHALL BE IN ACCORDANCE WITH SECTION 8.2.7.0 OF SSSWCW AND CONFORM TO ANWWA C500.
11. BUTTERFLY VALVES SHALL BE IN ACCORDANCE WITH SECTION 8.2.8.0 OF SSSWCW AND CONFORM TO ANWWA C504.
12. VALVE BOXES SHALL BE IN ACCORDANCE WITH SECTION 8.2.9.0 OF SSSWCW AND CONFORM TO ANWWA C504.
13. FITTINGS SHALL BE CLASS 150 IN ACCORDANCE WITH SECTION 8.2.2.0 OF SSSWCW, CONFORMING TO ANWWA C110, AND PROVIDED WITH MECHANICAL JOINTS.
14. MECHANICAL JOINTS SHALL BE MADE WITH "COR TEN" NUTS AND BOLTS, OR CORROSION-RESISTANT EQUIVALENTS CONFORMING TO ANWWA C111.
15. POLYETHYLENE PIPE SHALL BE IN ACCORDANCE WITH SECTION 8.2.1.0 OF SSSWCW AND PROVIDED FOR ALL METAL PIPES AND FITTINGS.
16. THRUST RESTRAINT SHALL BE IN ACCORDANCE WITH SECTION 4.31.3 OF SSSWCW AND PROVIDED FOR ALL BENDS, CAPS, PLUGS, AND TEES.
17. TRENCH SECTION SHALL BE IN ACCORDANCE WITH FILE NO. 36 OF SSSWCW MAXIMUM ALLOWABLE TRENCH WIDTH SHALL BE OUTSIDE DIAMETER OF PIPE PLUS 20 INCHES.
18. PIPE BEDDING AND COVER MATERIAL SHALL BE IN ACCORDANCE WITH SECTION 8.4.3.0 OF SSSWCW.
19. TRENCH BACKFILL MATERIAL SHALL BE MECHANICALLY COMPACTED GRANULAR BACKFILL IN ACCORDANCE WITH SECTION 8.4.3.4 OF SSSWCW BENEATH AND WITHIN 5 FEET OF PAVEMENT AREAS.
20. TRENCH BACKFILL MATERIAL SHALL BE MECHANICALLY COMPACTED GRANULAR BACKFILL IN ACCORDANCE WITH SECTION 8.4.3.5 OF SSSWCW BENEATH GREENSPACE AREAS.
21. CAUTION MUST BE FOLLOWED REGARDING THE COMPACTION OF ALL UTILITY TRENCHES.
22. TRACER WIRE SHALL BE BLUE AND INSTALLED IN ACCORDANCE WITH SECTION 2.11.2 OF SSSWCW ON ALL BURIED NON-METALLIC PUBLIC WATER MAIN PIPE, PRIVATE WATER MAIN PIPE, AND BUILDING WATER SERVICE PIPE.
23. PROPOSED WATER SERVICES SHOWN ON THIS PLAN SHALL TERMINATE AT A POINT FIVE (5) FEET FROM THE EXTERIOR BUILDING WALL.
24. THE CONTRACTOR IS RESPONSIBLE FOR THE SIZE, TYPE AND NUMBER OF BENDS REQUIRED TO COMPLETE CONSTRUCTION, WHICH SHALL BE INCIDENTAL AND INCLUDED IN THE COST OF WORK.
25. THE CONTRACTOR SHALL ADJUST ALL VALVE BOXES TO FINISHED SURFACE UPON COMPLETION OF PAVING OPERATIONS.
26. THE CONTRACTOR IS RESPONSIBLE FOR PRESSURE TESTING AND SAFE WATER SAMPLING.
27. POLYETHYLENE TUBING SHALL BE IN ACCORDANCE WITH SECTION 8.2.4.0 OF SSSWCW AND CONFORM TO ANWWA C901.
28. TRACER WIRE SHALL BE GREEN AND INSTALLED IN ACCORDANCE WITH SECTION 2.11.2 OF SSSWCW ON ALL BURIED NON-METALLIC PUBLIC SANITARY SEWER PIPE, PRIVATE SANITARY INTERCEPTOR PIPE, AND BUILDING STORM SERVICE PIPE.

33 30 00 – SANITARY SEWERAGE

- 1. WORK SHALL CONSIST OF INSTALLATION AND TESTING OF THE SANITARY SEWERAGE SYSTEM AND ALL APPURTENANCES.
2. ALL ITEMS SHALL INCLUDE ALL NECESSARY MATERIALS AND LABOR TO COMPLETE THE ITEM IN PLACE.
3. ALL PUBLIC SANITARY SEWERAGE WORK SHALL BE IN ACCORDANCE WITH SSSWCW AND MUNICIPALITY DEVELOPMENT STANDARDS.
4. ALL PRIVATE SANITARY SEWERAGE WORK SHALL BE IN ACCORDANCE WITH WISCONSIN ADMINISTRATIVE CODE AND MUNICIPALITY DEVELOPMENT STANDARDS.
5. POLYVINYL CHLORIDE (PVC) PIPE AND FITTINGS SHALL BE SDR 35 CONFORMING TO ASTM D3034 FOR DEPTHS LESS THAN 18 FEET, OR SHALL BE SDR 41 CONFORMING TO ANWWA C900 FOR DEPTHS GREATER THAN 18 FEET.
6. MANHOLES SHALL BE PRECAST REINFORCED CONCRETE IN ACCORDANCE WITH SECTION 8.3.0 OF SSSWCW AND CONFORM TO ASTM C478.
7. TRENCH SECTION SHALL BE CLASS B IN ACCORDANCE WITH SECTION 3.2.6 OF SSSWCW.
8. PIPE BEDDING AND COVER MATERIAL SHALL BE IN ACCORDANCE WITH SECTION 8.4.3.0 OF SSSWCW.
9. TRENCH BACKFILL MATERIAL SHALL BE MECHANICALLY COMPACTED GRANULAR BACKFILL IN ACCORDANCE WITH SECTION 8.4.3.4 OF SSSWCW BENEATH AND WITHIN 5 FEET OF PAVEMENT AREAS.
10. CAUTION MUST BE FOLLOWED REGARDING THE COMPACTION OF ALL UTILITY TRENCHES.
11. ALL CONNECTIONS TO EXISTING SANITARY SEWER PIPES AND STRUCTURES SHALL BE CORED CONNECTIONS, UNLESS NOTED OTHERWISE.
12. CLEANOUTS AND RISER EXTENSIONS SHALL BE INSTALLED IN ACCORDANCE WITH SPS 382.35 FROM SEWER PIPES TO GROUND SURFACE.
13. TRACER WIRE SHALL BE GREEN AND INSTALLED IN ACCORDANCE WITH SECTION 2.11.2 OF SSSWCW ON ALL BURIED NON-METALLIC PUBLIC SANITARY SEWER PIPE, PRIVATE SANITARY INTERCEPTOR PIPE, AND BUILDING STORM SERVICE PIPE.
14. ALL COPYRIGHTS TO THESE DRAWINGS ARE RESERVED. THEY MAY NOT BE COPIED, CHANGED, OR ASSIGNED TO ANY THIRD PARTY IN ANY MANNER WITHOUT OBTAINING THE EXPRESSED WRITTEN PERMISSION OF R.A.SMITH, INC.

DIVISION 33 – UTILITIES

- 13. TRACER WIRE SHALL BE GREEN AND INSTALLED IN ACCORDANCE WITH SECTION 2.11.2 OF SSSWCW ON ALL BURIED NON-METALLIC PUBLIC SANITARY SEWER PIPE, PRIVATE SANITARY INTERCEPTOR PIPE, AND BUILDING STORM SERVICE PIPE.
14. PROPOSED SANITARY SERVICES SHOWN ON THIS PLAN SHALL TERMINATE AT A POINT FIVE (5) FEET FROM THE EXTERIOR BUILDING WALL.
15. THE CONTRACTOR SHALL ADJUST ALL MANHOLE RIMS TO FINISHED SURFACE UPON COMPLETION OF PAVING OPERATIONS.
16. AFTER INSTALLATION OF SANITARY SEWERAGE SYSTEM, CLEAN ALL DEBRIS FROM SYSTEM AND INSPECT FOR DAMAGE.
17. AFTER INSTALLATION OF SANITARY SEWERAGE SYSTEM, CLEAN ALL DEBRIS FROM SYSTEM AND INSPECT FOR DAMAGE.
18. AFTER INSTALLATION OF SANITARY SEWERAGE SYSTEM, CLEAN ALL DEBRIS FROM SYSTEM AND INSPECT FOR DAMAGE.

33 40 00 – STORMWATER DRAINAGE

- 1. WORK SHALL CONSIST OF INSTALLATION AND TESTING OF THE STORMWATER DRAINAGE SYSTEM AND ALL APPURTENANCES.
2. ALL ITEMS SHALL INCLUDE ALL NECESSARY MATERIALS AND LABOR TO COMPLETE THE ITEM IN PLACE.
3. ALL PUBLIC STORMWATER DRAINAGE WORK SHALL BE IN ACCORDANCE WITH SSSWCW AND MUNICIPALITY DEVELOPMENT STANDARDS.
4. ALL PRIVATE STORMWATER DRAINAGE WORK SHALL BE IN ACCORDANCE WITH WISCONSIN ADMINISTRATIVE CODE AND MUNICIPALITY DEVELOPMENT STANDARDS.
5. REINFORCED CONCRETE PIPE (RCP) AND END SECTIONS SHALL BE IN ACCORDANCE WITH SECTION 8.6.0 OF SSSWCW AND CONFORM TO ASTM C78 WITH RUBBER GASKETED JOINTS CONFORMING TO ASTM C443 UNLESS NOTED OTHERWISE.
6. CORRUGATED METAL PIPE (CMP) AND END SECTIONS SHALL BE 16 GAUGE CONFORMING TO ASTM A760.
7. POLYETHYLENE TUBING SHALL BE IN ACCORDANCE WITH SECTION 8.2.4 OF SSSWCW AND CONFORM TO ANWWA C901.
8. POLYVINYL CHLORIDE (PVC) PIPE AND FITTINGS SHALL BE SDR 35 CONFORMING TO ASTM D3034 WITH PUSH-ON RUBBER GASKETED JOINTS CONFORMING TO ASTM D3212.
9. MANHOLES SHALL BE PRECAST REINFORCED CONCRETE IN ACCORDANCE WITH SECTION 8.3.0 OF SSSWCW AND CONFORM TO ASTM C478.
10. CATCH BASINS SHALL BE PRECAST REINFORCED CONCRETE IN ACCORDANCE WITH SECTION 3.6.0 OF SSSWCW AND CONFORM TO ASTM C478.
11. INLETS SHALL BE PRECAST REINFORCED CONCRETE IN ACCORDANCE WITH SECTION 3.6.0 OF SSSWCW AND CONFORM TO ASTM C913.
12. AREA DRAINS SHALL BE ADS NYLOPLAST AS APPROVED BY THE WISCONSIN DEPARTMENT OF SAFETY AND PROFESSIONAL SERVICES PLUMBING PRODUCTS REGISTER.
13. FRAMES AND GRATES SHALL BE AS INDICATED.
14. TRENCH SECTION SHALL BE CLASS B IN ACCORDANCE WITH SECTION 3.2.6 OF SSSWCW.
15. PIPE BEDDING AND COVER MATERIAL SHALL BE IN ACCORDANCE WITH SECTION 8.4.3.0 OF SSSWCW.
16. TRENCH BACKFILL MATERIAL SHALL BE MECHANICALLY COMPACTED GRANULAR BACKFILL IN ACCORDANCE WITH SECTION 8.4.3.4 OF SSSWCW BENEATH AND WITHIN 5 FEET OF PAVEMENT AREAS.
17. CAUTION MUST BE FOLLOWED REGARDING THE COMPACTION OF ALL UTILITY TRENCHES.
18. ALL CONNECTIONS TO EXISTING STORM SEWER PIPES AND STRUCTURES SHALL BE CORED CONNECTIONS, UNLESS NOTED OTHERWISE.
19. FLEXIBLE COMPRESSION COUPLINGS SHALL BE USED IN THE CONNECTION OF DISSIMILAR PIPE MATERIALS.
20. CLEANOUTS AND RISER EXTENSIONS SHALL BE INSTALLED IN ACCORDANCE WITH SPS 382.35 FROM SEWER PIPES TO GROUND SURFACE.
21. TRACER WIRE SHALL BE BROWN AND INSTALLED IN ACCORDANCE WITH SECTION 2.11.1 OF SSSWCW ON ALL BURIED NON-METALLIC PUBLIC STORM WATER PIPE, PRIVATE STORM INTERCEPTOR PIPE, AND BUILDING STORM SERVICE PIPE.
22. FIELD TILE ENCOUNTERED DURING CONSTRUCTION SHALL BE CONNECTED TO THE STORMWATER DRAINAGE SYSTEM.
23. PROPOSED STORM SERVICES SHOWN ON THIS PLAN SHALL TERMINATE AT A POINT FIVE (5) FEET FROM THE EXTERIOR BUILDING WALL.
24. THE CONTRACTOR SHALL ADJUST ALL MANHOLE RIMS AND INLETS TO FINISHED SURFACE UPON COMPLETION OF PAVING OPERATIONS.
25. AFTER INSTALLATION OF STORMWATER DRAINAGE SYSTEM, CLEAN ALL DEBRIS FROM SYSTEM AND INSPECT FOR DAMAGE.

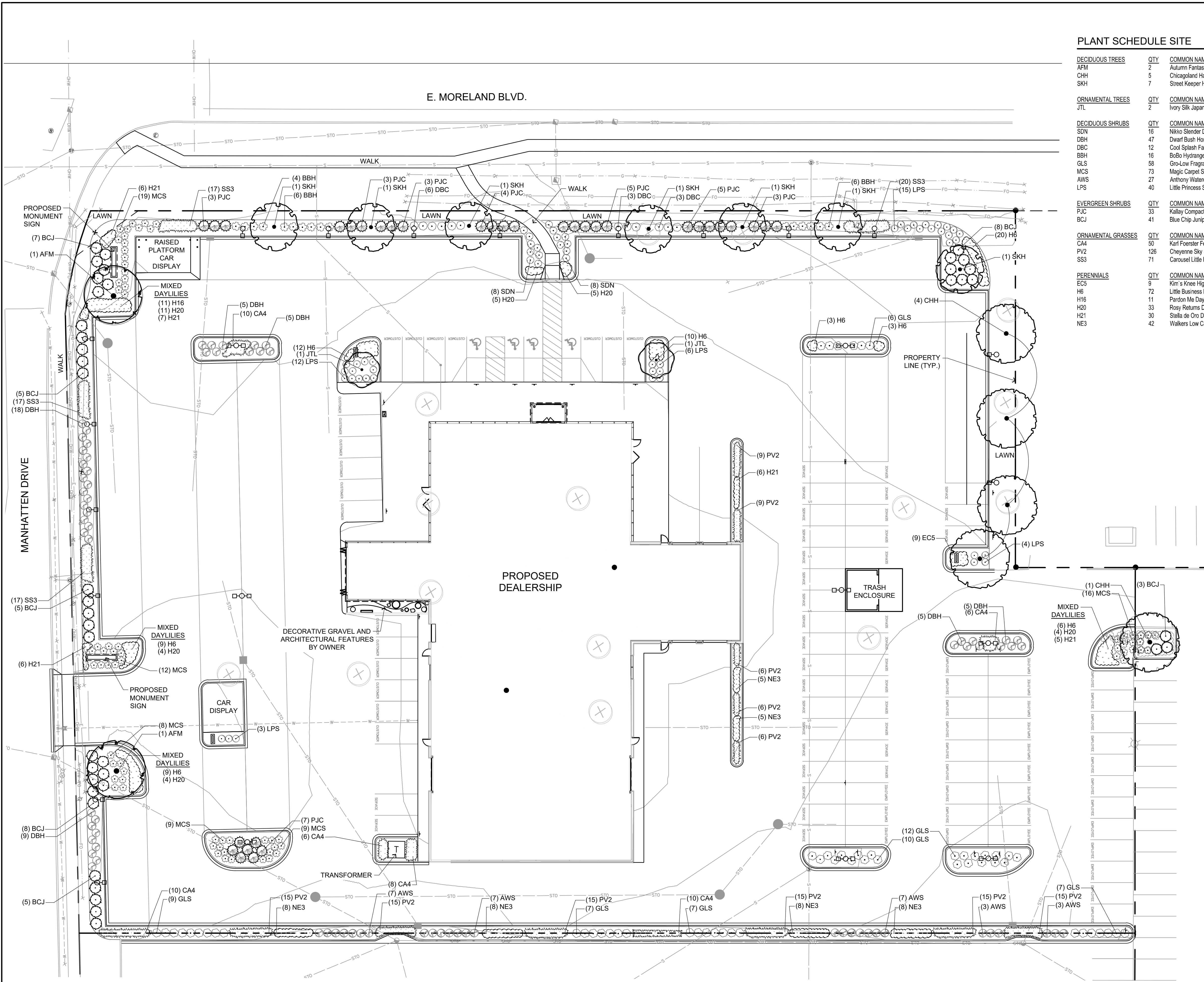
SEQUENCE OF CONSTRUCTION

- 1. TO OBTAIN CITY STORM WATER PERMIT AND PERFORM WEEKLY EROSION CONTROL INSPECTIONS AND SUBMIT INSPECTIONS TO CITY EROSION CONTROL INSPECTOR.
2. INSTALL ROCK CONSTRUCTION ENTRANCES.
3. INSTALL SILT FENCE AS SHOWN ON THE PLAN.
4. INSTALL STORM DRAIN INLET PROTECTION ON EXISTING INDICATED STORM INLETS.
5. STRIP TOPSOIL AND GRADE SITE IN INCREMENTS APPROPRIATE TO WORK WHILE MAINTAINING SEDIMENTATION AND EROSION CONTROL PRACTICES IN CONFORMANCE WITH LOCAL AND STATE GUIDELINES.
6. INSTALL ADDITIONAL EROSION AND SEDIMENT CONTROL BMPs AS NOTED WHEN SITE WORK AND GRADING ALLOWS.
7. CONSTRUCT UTILITIES AND INSTALL ADDITIONAL STORM DRAIN INLET PROTECTION TO INLETS AS SOON AS THEY ARE CONSTRUCTED.
8. TEMPORARILY SEED AND MULCH SITE.
9. PREPARE PARKING LOT SUBGRADE, INSTALL CURB AND GUTTER AND PAVE SITE.
10. APPLY SEED, FERTILIZER, AND MULCH TO LANDSCAPE LAWN AREAS AS SOON AS POSSIBLE.
11. FLUSH STORM SEWER.
12. AT END OF PROJECT, COORDINATE PERMIT TERMINATION WITH CITY EROSION INSPECTOR.
13. AT END OF PROJECT, COORDINATE PERMIT TERMINATION WITH CITY EROSION INSPECTOR.
14. ALL REMAINING TEMPORARY EROSION CONTROL BMPs SHALL BE REMOVED AND RESTORED AS NECESSARY.



Know what's below. Call before you dig.

DESCRIPTION, DATE, 16745 W. Blenheim Road, Brookfield, WI 53005-9398, (262) 781-1000, rasmith.com, WAKUESHA GENESIS CITY OF WAUKESHA, WISCONSIN SPECIFICATIONS, R.A. SMITH, INC. COPYRIGHT 2022, DATE: 09/23/2022, SCALE: N.T.S., JOB NO. 3210204.01, PROJECT MANAGER: RYAN J. LANCOUR, P.E., DESIGNED BY: JJJ, CHECKED BY: RJL, SHEET NUMBER C600

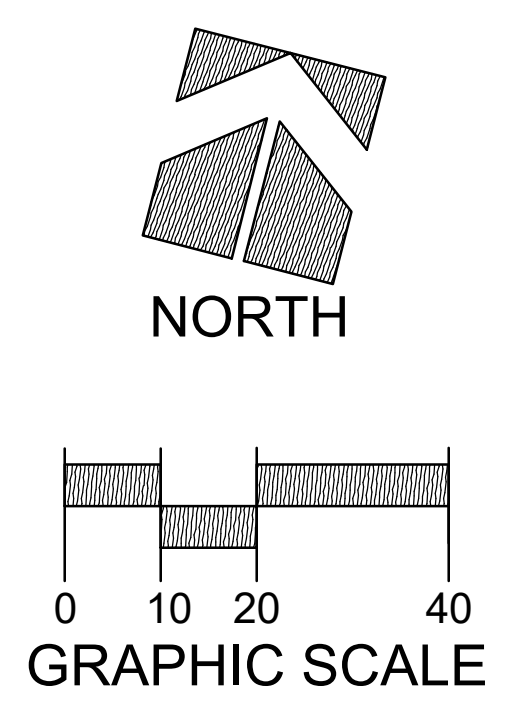


PLANT SCHEDULE SITE

DECIDUOUS TREES	QTY	COMMON NAME	BOTANICAL NAME	SIZE	ROOT	REMARKS
AFM	2	Autumn Fantasy Maple	Acer freemanii 'Autumn Fantasy'	2" CAL	B&B	Full, matching heads
CHH	5	Chicagoland Hackberry	Celtis occidentalis 'Chicagoland'	2" CAL	B&B	Full, matching heads
SKH	7	Street Keeper Honey Locust	Gledisia triacanthos 'Draves'	2" CAL	B&B	Full, matching heads
ORNAMENTAL TREES	QTY	COMMON NAME	BOTANICAL NAME	SIZE	ROOT	REMARKS
JTL	2	Ivory Silk Japanese Tree Lilac	Syringa reticulata 'Ivory Silk'	2" CAL	B&B	Full, matching heads
DECIDUOUS SHRUBS	QTY	COMMON NAME	BOTANICAL NAME	SIZE	ROOT	REMARKS
SDN	16	Nikko Slender Deutzia	Deutzia gracilis 'Nikko'	15' HT	CONT.	
DBH	47	Dwarf Bush Honeysuckle	Diervilla lonicera	15' HT	CONT.	
DBC	12	Cool Splash False Honeysuckle	Diervilla sessilifolia 'Cool Splash'	15' HT	CONT.	
BBH	16	BoBo Hydrangea	Hydrangea paniculata 'ILVOBO'	24" HT	CONT.	
GLS	58	Gro-Low Fragrant Sumac	Rhus aromatica 'Gro-Low'	15' HT	CONT.	
MCS	73	Magic Carpet Spirea	Spiraea japonica 'Magic Carpet'	15' HT	CONT.	
AWS	27	Anthony Waterer Spirea	Spiraea x bumalda 'Anthony Waterer'	15' HT	CONT.	
LPS	40	Little Princess Spirea	Spiraea x japonica 'Little Princess'	15' HT	CONT.	
EVERGREEN SHRUBS	QTY	COMMON NAME	BOTANICAL NAME	SIZE	ROOT	REMARKS
PJC	33	Kalloy Compact Pfitzer Juniper	Juniperus chinensis 'Kalloy Compact'	18"SPD	CONT.	
BCJ	41	Blue Chip Juniper	Juniperus horizontalis 'Blue Chip'	18"SPD	CONT.	
ORNAMENTAL GRASSES	QTY	COMMON NAME	BOTANICAL NAME	SIZE	ROOT	REMARKS
CA4	50	Karl Foerster Feather Reed Grass	Calamagrostis x acutiflora 'Karl Foerster'	1 GAL	POT	24" Spacing
PV2	126	Cheyenne Sky Switch Grass	Panicum virgatum 'Cheyenne Sky'	1 GAL	POT	18" Spacing
SS3	71	Carousel Little Bluestem Grass	Schizachyrium scoparium 'Carousel'	1 GAL	POT	24" Spacing
PERENNIALS	QTY	COMMON NAME	BOTANICAL NAME	SIZE	ROOT	REMARKS
EC5	9	Kim's Knee High Purple Coneflower	Echinacea purpurea 'Kim's Knee High TM'	1 GAL	POT	18" Spacing
H6	72	Little Business Daylily	Hemerocallis x 'Little Business'	1 GAL	POT	24" Spacing
H16	11	Pardon Me Daylily	Hemerocallis x 'Pardon Me'	1 GAL	POT	18" Spacing
H20	33	Rosy Returns Daylily	Hemerocallis x 'Rosy Returns'	1 GAL	POT	18" Spacing
H21	30	Stella de Oro Daylily	Hemerocallis x 'Stella de Oro'	4 1/2"	POT	18" Spacing
NE3	42	Walkers Low Catmint	Nepeta x faassenii 'Walkers Low'	4 1/2"	POT	24" Spacing

SITE DATA

PROPOSED IMPERVIOUS AREA	113,263 SF (2.60 AC)
PROPOSED PAVEMENT AREA	14,781 SF (0.34 AC)
TOTAL GREEN SPACE	11.56%
TOTAL INTERIOR GREEN SPACE	5.68%
TOTAL PROPERTY AREA	128,044 SF (2.94 AC)



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DESCRIPTION	
DATE	
16745 W. Bluemound Road Brookfield, WI 53005-5938 (262) 781-1000 rasmith.com	
 CREATIVITY BEYOND ENGINEERING	
Brookfield, WI Milwaukee, WI Appleton, WI Madison, WI Cedarburg, WI Naperville, IL Irvine, CA	
WAUKESHA GENESIS CITY OF WAUKESHA, WISCONSIN LANDSCAPE PLAN	
© COPYRIGHT 2022 R.A. Smith, Inc. DATE: 09/23/2022 SCALE: 1" = 20' JOB NO. 3210204.01 PROJECT MANAGER: RYAN J. LANCOUR, P.E. DESIGNED BY: JJJ CHECKED BY: RJL	
SHEET NUMBER L100	

