



# REDEVELOPMENT AUTHORITY OF THE CITY OF MILWAUKEE

## SPECIAL OFFICIAL NOTICE NO. 45 CENTURY CITY REDEVELOPMENT PROJECT, AREA A ZONE #1 NORTH END IMPROVEMENTS 3945 NORTH 31ST STREET, MILWAUKEE, WI

MARCH 12, 2015  
**ISSUED FOR BIDDING**

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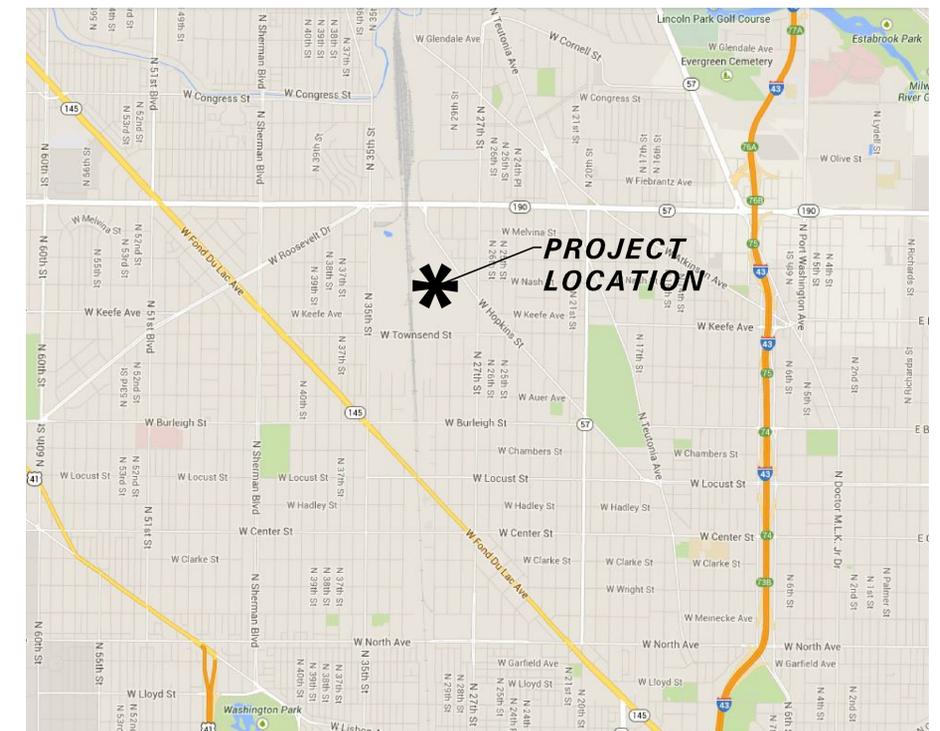
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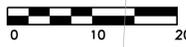
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NOTE: THESE DRAWINGS ALONG WITH REFERENCED TECHNICAL SPECIFICATIONS, ARE TO BE REVIEWED AND COORDIANATED BY THE CONTRACTOR IN CORRESPONDENCE WITH DRAWINGS AND TECHNICAL SPECIFICATIONS PREPARED BY THE SIGMA GROUP AND ZIMMERMAN ARCHITECTURAL STUDIOS, INCORPORATED INTO THE PROJECT AS PART OF THE BID SET. CONFLICTS FOUND BETWEEN THE TWO SETS OF DRAWINGS AND SPECIFICATIONS ARE TO BE DOCUMENTED BY THE CONTRACTOR AND SUBMITTED TO THE OWNER AND ENGINEER IN WRITING PRIOR TO START OF WORK. OWNER AND ENGINEER SHALL REVIEW THE WRITTEN SUBMISSION AND PROVIDE RESPONSE TO THE CONTRACTOR FOR ACTIONS TO RESOLVE THE CONFLICT.

**GRAEF**  
One Honey Creek Corporate Center  
125 South 84th Street,  
Suite 401  
Milwaukee, WI 53214-1470  
414 / 259-1500  
414 / 259-0037 fax  
www.graef-usa.com





**48" COMBINED SEWER**

W. CAPITOL DRIVE

CONC. CURB

12" SAN

8" WATER

**ZONE #1**

**(ZONE #2)**

**GENERAL NOTES**

- ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CITY OF MILWAUKEE "STREET CONSTRUCTION SPECIFICATIONS", DATED JULY 1, 1992, WITH REVISIONS DATED JULY 2014, AS MODIFIED BY THE GENERAL SPECIFICATIONS OF THE DEPARTMENT OF PUBLIC WORKS DATED JANUARY 31, 1992 WITH SUBSEQUENT REVISIONS.
- BASE SURVEY PREPARED BY OTHERS. ALL UNDERGROUND UTILITIES AND STRUCTURES HAVE BEEN SHOWN TO A REASONABLE DEGREE OF ACCURACY AND IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THEIR EXACT LOCATION AND TO AVOID DAMAGE THERETO.
- ELEVATION SHOWN ON CIVIL AND LANDSCAPE PLANS ARE CITY OF MILWAUKEE. MEAN SEA LEVEL NGVD29 CAN BE OBTAINED BY ADDING 580.6 TO CITY OF MILWAUKEE ELEVATIONS.
- CONTRACTOR SHALL VERIFY LOCATIONS OF PROPOSED WORK AND REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO COMMENCING WORK.

**TRAFFIC NOTES**

- MAINTAIN ACCESS AT ALL TIMES.
- PAVEMENT MARKINGS DISTURBED DUE TO CONSTRUCTION MUST BE RETURNED TO ORIGINAL MATERIAL AND CONDITION.
- PROVIDE SEVEN (7) DAYS ADVANCED NOTICE TO TRAFFIC ENGINEERING AT 414-286-3632 FOR THE TEMPORARY CLOSURE OF TRAFFIC LANES, INSTALLATION OF TEMPORARY "NO PARKING" SIGNS, OR IF THERE ARE ANY QUESTIONS CONCERNING THESE COMMENTS.
- ANY PERSON WORKING IN THE PUBLIC WAY SHALL COMPLY WITH THE CITY OF MILWAUKEE, DEPARTMENT OF PUBLIC WORKS BOOKLET "TRAFFIC CONTROL FOR CONSTRUCTION AND MAINTENANCE WORK", AND PART VI OF THE STATE OF WISCONSIN "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES".

**STREET LIGHT NOTES**

- STREET LIGHTING HAS CONDUITS AND CABLES WITHIN THE PROJECT LIMITS. THESE CONDUITS AND CABLES SHALL BE SUPPORTED IF IMPACTED BY TRENCHING ACTIVITIES. DAMAGES SHALL BE REPORTED TO THE STREET LIGHTING SHOP AT 414-286-3015.
- IF THERE ARE ANY IMPACTS TO CITY OF MILWAUKEE STREET LIGHTING EQUIPMENT, THE CONTRACTOR SHALL CONTACT ENG-KIE LEE IN ENGINEERING AT 414-286-2174 FOR NECESSARY ALTERATIONS.
- IF THERE ARE ANY IMPACTS TO CITY OF MILWAUKEE TRAFFIC SIGNALS OR TRAFFIC CONTROL EQUIPMENT, THE CONTRACTOR SHALL CONTACT JOSEPH BONDOWSKI IN ENGINEERING AT 414-286-5162 FOR NECESSARY ALTERATIONS.

SURVEY: NO CITY OF MILWAUKEE SURVEY. SURVEY COMPLETED AND EXECUTED BY CONSULTANT.

BENCH MARKS  
 BM1: NORTHEAST BOLT ON TOP FLANGE OF FIRE HYDRANT ON THE WEST SIDE OF HOPKINS ST. JUST NORTH OF GATE "E" ELEVATION = 85.4  
 BM2: NORTHEAST BOLT ON TOP FLANGE OF FIRE HYDRANT ON THE WEST SIDE OF HOPKINS ST. AT WISCONSIN ST. EXTENDED WEST. ELEVATION = 76.6

**LINE CODE LEGEND**

GAS	G	COMMUNICATIONS	COM	SEWER/WATER 24" & OVER	CS
ELECTRIC	E	SANITARY SEWER	SAN	STREET LIGHTING	ST
TELEPHONE	T	STORM SEWER	STD	PAVING LIMITS	PL
CABLE TELEVISION	TV	COMBINED SEWER	CWB	STRUCTURE / BUILDING	SB
FIBER OPTICS	FO	SEW. DISTRICT SEWER	SDS	FENCE	FW
CITY UNDERGROUND CONDUIT	CUC	WATER MAIN	WM	STEAM	ST

CALL DIGGERS HOTLINE  
 1-800-242-8511  
 TOLL FREE TO OBTAIN LOCATION OF UNDERGROUND BEFORE YOU DIG. WISCONSIN STATUTE 182.05 REQUIRES MIN. OF 3 WORK DAYS NOTICE BEFORE YOU EXCAVATE



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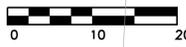
NO.	BY	REVISION	DATE

**ESTIMATE OF QUANTITIES**

ITEM NO.	QUANTITY	DESCRIPTION
1	160 LF	REMOVE CONC. RETAINING WALL
2	205 LF	REMOVE FENCE
3	2,350 SF	REMOVE CONC. SIDEWALK
4	475 SF	REMOVE STAMPED CONC. SIDEWALK
5	6 LF	SAWCUT CONCRETE
6	11 LF	REMOVE CONC. CURB AND GUTTER
7	124 SF	REMOVE CONC. PAVEMENT W/ CURB

**REDEVELOPMENT AUTHORITY OF THE CITY OF MILWAUKEE**  
 MILWAUKEE, WISCONSIN  
**DEMOLITION PLAN**  
 IN **W. CAPITOL DRIVE**  
 FROM RAILROAD TRACKS  
 TO N. 31ST STREET

HORIZONTAL SCALE	1" = 10'	APPROVED	DATE
VERTICAL SCALE	NA	DESIGN ENGINEER	
14 SEC. NO.		ENGINEER IN CHARGE	
PLAN DATE	03-12-15	CITY ENGINEER & SPECIAL DEPUTY COMMISSIONER OF PUBLIC WORKS	
DESIGNED BY		PROJECT NO. NA	C.C. FILE NO. NA
DRAWN BY		OFF. NOTICE NO. NA	DATE ADOPTED NA
CHECKED BY		SHEET NO. 3 OF 14 PLAN FILE NO. 000-00	
SYSTEM NO.			
EASEMENT NO.			
CONTRACT NO.			
PROJ. ID. XXX			



48" COMBINED SEWER

W. CAPITOL DRIVE

CONC. CURB

12" SAN

48" W

8" WATER

PROPOSED STAMPED CONC. SIDEWALK 5" THICK, PATTERN TO MATCH SIDEWALK AT INTERSECTION (TYP.)

PROPOSED CONC. SIDEWALK 5" THICK (TYP.)

PROPOSED STAMPED CONC. SIDEWALK 5" THICK (TYP.)

PROPOSED CONC. PAVEMENT 7" THICK WITH INTEGRAL CURB

PROPOSED CONC. CURB AND GUTTER

HANDICAP RAMP

SOD RESTORATION TO SIDEWALK LIMITS, SEE LANDSCAPE PLANS

**ZONE #1**

**(ZONE #2)**  
N. 31ST STREET

EX. 72" STORM SEWER (ABANDONED)

CAUTION EX. HIGH-PRESSURE NATURAL GAS MAIN

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- ELEVATION SHOWN ON CIVIL AND LANDSCAPE PLANS ARE CITY OF MILWAUKEE, MEAN SEA LEVEL, NGVD29 CAN BE OBTAINED BY ADDING 580.6 TO CITY OF MILWAUKEE ELEVATIONS.
- CONTRACTOR SHALL VERIFY LOCATIONS OF PROPOSED WORK AND REPORT AND DISCREPANCIES TO THE ENGINEER PRIOR TO COMMENCING WORK.

**TRAFFIC NOTES**

- MAINTAIN ACCESS AT ALL TIMES.
- PAVEMENT MARKINGS DISTURBED DUE TO CONSTRUCTION MUST BE RETURNED TO ORIGINAL MATERIAL AND CONDITION.
- PROVIDE SEVEN (7) DAYS ADVANCED NOTICE TO TRAFFIC ENGINEERING AT 414-286-3632 FOR THE TEMPORARY CLOSURE OF TRAFFIC LANES, INSTALLATION OF TEMPORARY "NO PARKING" SIGNS, OR IF THERE ARE ANY QUESTIONS CONCERNING THESE COMMENTS.
- ANY PERSON WORKING IN THE PUBLIC WAY SHALL COMPLY WITH THE CITY OF MILWAUKEE, DEPARTMENT OF PUBLIC WORKS BOOKLET "TRAFFIC CONTROL FOR CONSTRUCTION AND MAINTENANCE WORK" AND PART VI OF THE STATE OF WISCONSIN "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES".
- COORDINATE WITH MILWAUKEE COUNTY TRANSIT SYSTEM (MCTS) AS NEEDED. IF ACCESS TO BUS SHELTERS OR BUS STOPS WILL BE AFFECTED, COORDINATE TEMPORARY LOCATIONS AND REINSTALLATION. MCTS WILL LOCATE TEMPORARY BUS STOPS AND SIGNS. CONTACT MCTS AT (414) 343-1764 AS LEAST 5 WORKING DAYS BEFORE WORK IS STARTED.

**STREET LIGHT NOTES**

- STREET LIGHTING HAS CONDUITS AND CABLES WITHIN THE PROJECT LIMITS. THESE CONDUITS AND CABLES SHALL BE SUPPORTED IF IMPACTED BY TRENCHING ACTIVITIES. DAMAGES SHALL BE REPORTED TO THE STREET LIGHTING SHOP AT 414-286-3015.
- IF THERE ARE ANY IMPACTS TO CITY OF MILWAUKEE STREET LIGHTING EQUIPMENT, THE CONTRACTOR SHALL CONTACT ENGR. KIE LEE IN ENGINEERING AT 414-286-2174 FOR NECESSARY ALTERATIONS.
- IF THERE ARE ANY IMPACTS TO CITY OF MILWAUKEE TRAFFIC SIGNALS OR TRAFFIC CONTROL EQUIPMENT, THE CONTRACTOR SHALL CONTACT JOSEPH BONDOWSKI IN ENGINEERING AT 414-286-5162 FOR NECESSARY ALTERATIONS.

**ESTIMATE OF QUANTITIES**

ITEM NO.	QUANTITY	DESCRIPTION
1	685 SF	INSTALL CONC. SIDEWALK
2	556 SF	INSTALL STAMPED CONC. SIDEWALK
3	124 SF	INSTALL CONC. PAVEMENT W/ CURB
4	11 LF	INSTALL CONC. CURB AND GUTTER

**REDEVELOPMENT AUTHORITY OF THE CITY OF MILWAUKEE**  
MILWAUKEE, WISCONSIN

**SITE PLAN**

IN **W. CAPITOL DRIVE**  
FROM RAILROAD TRACKS  
TO N. 31ST STREET

HORIZONTAL SCALE	1" = 10'	APPROVED	DATE
VERTICAL SCALE	NA		
14 SEC. NO.			DESIGN ENGINEER
PLAN DATE	03-12-15		
DESIGNED BY			
DRAWN BY			
CHECKED BY			ENGINEER IN CHARGE
SYSTEM NO.			
EASEMENT NO.			
CONTRACT NO.		CITY ENGINEER & SPECIAL DEPUTY COMMISSIONER OF PUBLIC WORKS	
PROJ. ID. XXX		PROJECT NO. NA	C.C. FILE NO. NA
		OFF. NOTICE NO. NA	DATE ADOPTED NA

SHEET NO. 4 OF 14 PLAN FILE NO. 000-00

SURVEY: NO CITY OF MILWAUKEE SURVEY. SURVEY COMPLETED AND EXECUTED BY CONSULTANT.

BENCH MARKS  
BM1: NORTHEAST BOLT ON TOP FLANGE OF FIRE HYDRANT ON THE WEST SIDE OF HOPKINS ST. JUST NORTH OF GATE "E" ELEVATION - 85.4  
BM2: NORTHEAST BOLT ON TOP FLANGE OF FIRE HYDRANT ON THE WEST SIDE OF HOPKINS ST. AT WISCONSIN ST. EXTENDED WEST. ELEVATION - 76.6

**LINE CODE LEGEND**

GAS	G	COMMUNICATIONS	COM	SEWER/WATER 24" & OVER	SW
ELECTRIC	E	SANITARY SEWER	SAN	STREET LIGHTING	SL
TELEPHONE	T	STORM SEWER	STO	PAVING LIMITS	PL
CABLE TELEVISION	CTV	COMBINED SEWER	CS	STRUCTURE / BUILDING	SB
FIBER OPTICS	FO	SEW. DISTRICT SEWER	SDS	FENCE	FN
CITY UNDERGROUND CONDUIT	CUC	WATER MAIN	WM	STEAM	ST

**CALL DIGGERS HOTLINE**  
1-800-242-8511  
TOLL FREE TO OBTAIN LOCATION OF UNDERGROUND BEFORE YOU DIG. WISCONSIN STATUTE 92.03 REQUIRES MIN. OF 3 WORK DAYS NOTICE BEFORE YOU EXCAVATE



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NO.	BY	REVISION	DATE

AS BUILT CONTRACT NO. \_\_\_\_\_ DATE ENT'D. \_\_\_\_\_  
ENT'D. BY \_\_\_\_\_





# LANDSCAPING AND PLANTING NOTES:

- BECOME AWARE OF ALL RELATED EXISTING AND PROPOSED CONDITIONS, UTILITIES, PIPES AND STRUCTURES, ETC. PRIOR TO BIDDING AND CONSTRUCTION.
- INSPECT THE SITE PRIOR TO COMMENCING WORK. THE LANDSCAPE CONTRACTOR SHALL DOCUMENT IN WRITING AND PHOTOGRAPH ALL EXISTING CONDITIONS WITHIN, AND IN AREAS ADJACENT TO, THE LIMITS OF CONSTRUCTION. DIGITAL COPIES OF PHOTOGRAPHS SHALL BE PROVIDED TO THE LANDSCAPE ARCHITECT.
- CONFIRM FIELD LOCATION OF ALL PUBLIC UNDERGROUND UTILITY LINES, INCLUDING DEPTHS OF SAID, WITHIN THE LIMITS OF CONSTRUCTION.
- IF IT IS APPARENT THAT UNKNOWN OBSTRUCTIONS AND/OR GRADE DIFFERENCES EXIST THAT MAY NOT HAVE BEEN KNOWN DURING DESIGN, CONTACT OWNER'S REPRESENTATIVE FOR CLARIFICATION.
- COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF SITE CONDITIONS, BOTH SURFACE AND SUBSURFACE. NO EXTRA PAYMENT SHALL ACCRUE BY VIRTUE OF UNKNOWN CONDITIONS FOR DIFFICULTIES IN PERFORMING THE CONTRACTED SCOPE OF WORK.
- COORDINATE WITH SUBCONTRACTORS AS REQUIRED TO ACCOMPLISH LANDSCAPE WORK, PLANTING WORK, AND RELATED OPERATIONS WITHIN THE CONTRACTED SCOPE.
- SEE SPECIFICATIONS AND DETAILS FOR PLANTING METHODS, REQUIREMENTS, SOIL TESTING, MATERIALS, EXECUTION AND PLANT PROTECTION, PLANT STAKING METHODS, PLANT PIT DIMENSIONS, BACKFILL AND OTHER RELATED REQUIREMENTS.
- SPECIFIC LAYOUT IS REQUIRED AS SHOWN ON THE LAYOUT, PLANTING, AND OTHER PLANS. PLANTS SHALL BE SPACED AS PER PLANS.
- PLANT NAMES MAY BE ABBREVIATED ON THE DRAWINGS. SEE PLANT LIST FOR SYMBOLS, ABBREVIATIONS, BOTANICAL/COMMON NAMES, SIZES, ESTIMATED QUANTITIES (IF GIVEN) AND OTHER REMARKS.
- FURNISH ALL PLANT MATERIALS FREE OF PESTS OR PLANT DISEASES, AND MAINTAIN AND WARRANT ALL PLANT MATERIALS PER THE SPECIFICATIONS FOR ONE COMPLETE GROWING SEASON FOLLOWING INSTALLATION AND OWNER'S ACCEPTANCE. ALL PLANTS SHALL BE SUBJECT TO OWNER'S ACCEPTANCE PRIOR TO INSTALLATION.
- FORM 72-INCH, OR AS OTHERWISE INDICATED, WATERING BASIN AROUND ALL TREES NOT INSTALLED IN LAWN OR PLANTING BEDS.
- MAINTAIN 72-INCH DIAMETER MINIMUM CLEAR SOIL AREA AROUND ALL TREES IN MANICURED TURF AREAS. MULCH TREE RING WITH SPECIFIED DEPTH OF HARDWOOD BARK MULCH. SEE PLANTING DETAILS.
- PROVIDE PROPER POSITIVE DRAINAGE THROUGHOUT THIS CONTRACT AREA. VERIFY FIELD CONDITIONS IN CONJUNCTION WITH THE PROPOSED ELEVATIONS TO ENSURE THAT ADEQUATE DRAINAGE IS PROVIDED. REPORT DEVIATIONS OR CONFLICTS TO OWNER'S REPRESENTATIVE. REFER TO CIVIL DRAWINGS FOR PROPOSED GRADES AND SLOPES.
- FINE GRADE, RAKE AND BE RESPONSIBLE FOR POSITIVE DRAINAGE AWAY FROM ALL STRUCTURES AND THROUGHOUT SITE WITHIN THE LIMITS OF CONSTRUCTION. NO LOW SPOTS OR PONDING OF SURFACE WATER WILL BE ACCEPTED IN THE FINAL WORK. NO ROCKS OR DEBRIS WILL BE ACCEPTED. FINAL GRADE TOLERANCES ARE +/-0.1 FOOT MAXIMUM.
- WHERE PROVIDED, AREA TAKEOFFS AND PLANT QUANTITY ESTIMATES ARE FOR INFORMATION ONLY. LANDSCAPE CONTRACTOR IS RESPONSIBLE TO CONDUCT QUANTITY TAKE-OFFS FOR ALL PLANT MATERIALS AND SIZES SHOWN ON PLANS. THE PLANS (PLANT SYMBOLS) TAKE PRECEDENCE IN CASE OF ANY DISCREPANCIES BETWEEN CALLOUTS, THE PLANT LIST, AND THE PLANS.
- COORDINATE WITH OTHER TRADES THE INSTALLATION OF PLANT MATERIAL WITH INSTALLATION OF ALL ADJACENT PAVEMENTS, DRAINAGE CURB AND RELATED STRUCTURES. DAMAGE CAUSED DURING LANDSCAPE INSTALLATION TO EXISTING CONDITIONS AND IMPROVEMENTS IS THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR.
- RESTORE ALL AREAS OF THE SITE, OR ADJACENT AREAS, WHERE DISTURBED. AREAS DISTURBED SHALL BE RESTORED WITH NEW SOD, EXCEPT IN THE SEEDED AREAS SHOWN ON THE PLAN, WHERE SEED IS THE PREFERRED RESTORATIVE.
- TAKE ALL NECESSARY SCHEDULING AND OTHER PRECAUTIONS TO AVOID WINTER, CLIMATIC, OR OTHER DAMAGE TO PLANTS.
- ALL PLANT BEDS AND TREE PLANTING PITS ARE TO RECEIVE 3" DEEP LAYER OF SHREDDED HARDWOOD BARK MULCH AS DEFINED IN WRITTEN SPECIFICATIONS.
- ALL PLANTING BEDS ARE TO BE SEPARATED FROM ADJACENT TURF AREAS WITH SHOVEL CUT EDGE. INSTALL PER LANDSCAPE DETAILS.
- PLANT SUBSTITUTIONS WILL NOT BE PERMITTED UNLESS IT CAN BE VERIFIED THAT THE PLANTS ARE NOT AVAILABLE FROM NURSERY SOURCES LOCATED A REASONABLE DISTANCE FROM THE PROJECT SITE. IF THIS SHOULD HAPPEN, ANY PROPOSED PLANT SUBSTITUTION WILL REQUIRE PRIOR REVIEW AND ACCEPTANCE BY THE PROJECT LANDSCAPE ARCHITECT.
- DETERMINE THE NEED FOR TREE STAKING. IF DETERMINED NECESSARY, PROVIDE TREE STAKING AS DESCRIBED IN WRITTEN SPECIFICATIONS.

PLANT LIST					
12/18/2014					
SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	MATURE SIZE
<b>SHADE TREES</b>					
ULR	Ulmus x 'Regal'	Regal Elm	2.5" BB	as shown	55'-65'h x 45'w

SURVEY: NO CITY OF MILWAUKEE SURVEY, SURVEY COMPLETED AND EXECUTED BY CONSULTANT.

BM-1: CHISELED CROSS IN CONC. EL. 48.23  
 BM-2: CHISELED CROSS ON SSE UPPER FLANGE BOLT EL. 47.49  
 BM-3: CUT CROSS ON NW UPPER FLANGE BOLT OF HYD. EL. 44.27  
 BM-4: NW UPPER HYD. FLANGE BOLT EL. 34.29

### LINE CODE LEGEND

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<b>ELECTRIC</b>	E	<b>SANITARY SEWER</b>	SAN	<b>STREET LIGHTING</b>	SL
<b>TELEPHONE</b>	T	<b>STORM SEWER</b>	STO	<b>PAVING LIMITS</b>	PL
<b>CABLE TELEVISION</b>	TV	<b>COMBINED SEWER</b>	CMB	<b>STRUCTURE / BUILDING</b>	SB
<b>FIBER OPTICS</b>	FO	<b>SEW/DISTRICT SEWER</b>	MSD	<b>FENCE</b>	FC
<b>CITY UNDERGROUND CONDUIT</b>	CUC	<b>WATER MAIN</b>	WM	<b>STEAM</b>	ST

SEE FILE NO. 234-41 FOR SPECIAL PROVISIONS

SHEET NO. 1 OF 3 IS PLAN FILE NO. 234-40  
 SHEET NO. 2 OF 3 IS PLAN FILE NO. 234-41  
 SHEET NO. 3 OF 3 IS PLAN FILE NO. 234-42



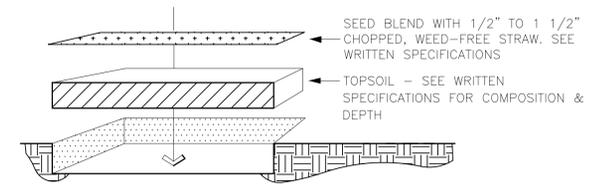
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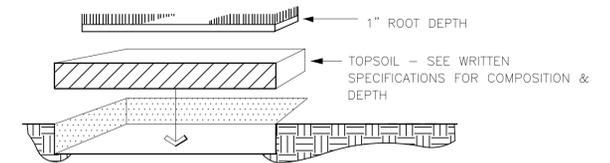
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 ENT'D. BY \_\_\_\_\_



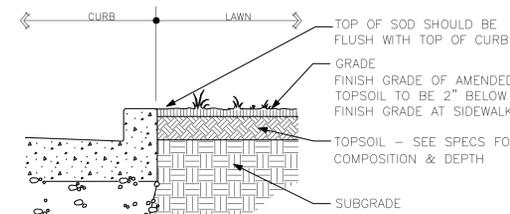
- TOPSOIL SHALL CONFORM TO PROPERTIES AS DESCRIBED IN WRITTEN SPECIFICATION.
- CONTRACTOR TO PROVIDE FINISHED TURF GRADE PER DRAWINGS WITH UNIFORM, NATURAL SLOPES PRIOR TO THE SOWING OF SEED. SEED BLEND & APPLICATION PROCEDURES ARE DESCRIBED IN WRITTEN SPECIFICATION.
- LANDSCAPE CONTRACTOR SHALL ESTABLISH VIGOROUS GROWTH AND MOW & MAINTAIN AS DESCRIBED IN WRITTEN SPECIFICATION.

## 3 MANICURED TURF SEEDING

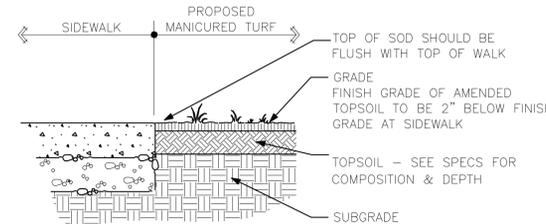


- TOPSOIL SHALL CONFORM TO PROPERTIES AS DESCRIBED IN WRITTEN SPECIFICATION.
- CONTRACTOR TO PROVIDE FINISHED TURF GRADE PER DRAWINGS WITH UNIFORM, NATURAL SLOPES PRIOR TO LAYING SOD. SOD BLEND & APPLICATION PROCEDURES ARE DESCRIBED IN WRITTEN SPECIFICATION.
- LAY SOD IN 'RUNNING BOND' FASHION (W/ALTERNATE JOINTS), COMPRESS EACH BUTT JOINT TO REDUCE SHRINKAGE CRACKS. ANCHOR SOD APPLICATIONS ON SLOPES GREATER THAN 1:3 W/10" WOOD PEGS.
- LANDSCAPE CONTRACTOR SHALL ESTABLISH VIGOROUS GROWTH AND MOW & MAINTAIN AS DESCRIBED IN WRITTEN SPECIFICATION.

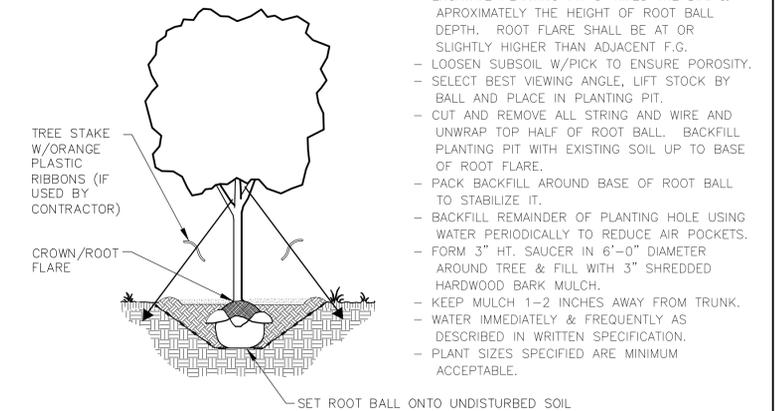
## 2 MANICURED TURF SOD



## 5 SOD LAWN EDGE @ CURB



## 4 SOD LAWN EDGE @ WALK



## 1 TREE PLANTING DETAIL

ESTIMATE OF QUANTITIES			REDEVELOPMENT AUTHORITY OF THE CITY OF MILWAUKEE	
ITEM NO.	QUANTITY	DESCRIPTION	MILWAUKEE, WISCONSIN	
			<b>LANDSCAPE DETAILS</b>	
			IN <b>W. CAPITOL DRIVE</b>	
			FROM <b>RAILROAD TRACKS</b>	
			TO <b>N. 31ST STREET</b>	
			SCALE HORIZONTAL N/A VERTICAL N/A	APPROVED _____ DATE _____
			1/4 SEC. NO. _____	DESIGN ENGINEER _____
			PLAN DATE <b>03-12-15</b>	
			DESIGNED BY <b>WJM</b>	
			DRAWN BY <b>WJM</b>	
			CHECKED BY <b>CWH</b>	ENGINEER IN CHARGE _____
			SYSTEM NO. _____	
			EASEMENT NO. _____	CITY ENGINEER & SPECIAL DEPUTY COMMISSIONER OF PUBLIC WORKS _____
			CONTRACT NO. _____	PROJECT NO. <b>NA</b> C.C. FILE NO. <b>NA</b>
			PROJ. ID. <b>XXX</b>	OFF. NOTICE NO. <b>NA</b> DATE ADOPTED <b>NA</b>
			<b>SHEET NO. 7 OF 14 PLAN FILE NO. 000-00</b>	







# GENERAL NOTES

## DESIGN SPECIFICATIONS:

- DESIGN IS IN ACCORDANCE WITH THE STATE OF WISCONSIN AND THE 2009 INTERNATIONAL BUILDING CODE.
- MINIMUM 28 DAY CONCRETE CYLINDER STRENGTH SHALL BE:
 

FOOTINGS	4000 PSI
PIERS	4000 PSI
FOUNDATION WALLS	4000 PSI
- REINFORCING STEEL SHALL CONFORM TO ASTM A615 GRADE 60.
- STRUCTURAL STEEL W-SHAPES SHALL CONFORM TO ASTM A588 GRADE 50.
- STRUCTURAL STEEL PLATES, ANGLES, CHANNELS, AND OTHER ROLLED MEMBERS SHALL CONFORM TO ASTM A588.
- RECTANGULAR OR SQUARE HSS MEMBERS SHALL CONFORM TO ASTM A847 GRADE 50.
- ASSUMED BEARING CAPACITY FOR SPREAD FOOTINGS IS 2000 PSF.
- DESIGN LOADS:
 

WIND LOAD (ASCE 7-05)	
PRESSURE	30 PSF
BASIC WIND SPEED	V = 90 MPH
- RESISTANCE TO LATERAL LOADS ON STRUCTURE IS PROVIDED BY RETAINING WALL AND HSS MEMBERS. CONTRACTOR SHALL PROVIDE SUFFICIENT TEMPORARY BRACING UNTIL ALL LATERAL SUPPORT SYSTEMS ARE IN PLACE AND FUNCTIONAL.
- ALL STRUCTURAL FRAMING AND CONNECTIONS HAVE BEEN DESIGNED FOR THE FINAL COMPLETED CONDITION AND HAVE NOT BEEN INVESTIGATED FOR POTENTIAL LOADINGS ENCOUNTERED DURING ERECTION AND CONSTRUCTION. ANY INVESTIGATION OF THE STRUCTURAL FRAMING AND CONNECTIONS FOR ADEQUACY DURING THE ERECTION AND CONSTRUCTION PROCESS IS THE RESPONSIBILITY OF THE CONTRACTOR.
- CONTRACTOR IS RESPONSIBLE FOR MEANS AND METHODS OF CONSTRUCTION AND JOB SITE SAFETY.
- PROVISIONS ARE INCLUDED FOR THE FOLLOWING FUTURE ADDITIONS:

## EARTHWORK:

- FOOTINGS SHALL BE CAST ON UNDISTURBED SUBSOIL. IF DESIGN CAPACITY IS NOT ENCOUNTERED AT THE ELEVATIONS SHOWN, FOOTINGS MUST BE LOWERED. CONSULT ENGINEER BEFORE PROCEEDING.
- NO HOLES, TRENCHES OR DISTURBANCES OF THE SOIL SHALL BE ALLOWED WITHIN THE VOLUME DESCRIBED BY 45 DEGREE LINES SLOPING FROM THE BOTTOM EDGE OF THE FOOTING. IF SUCH ARE REQUIRED, FOOTINGS MUST BE LOWERED.
- BACKFILL EVENLY ON EACH SIDE OF FOUNDATION WALLS AND RETAINING WALLS.

## CONCRETE:

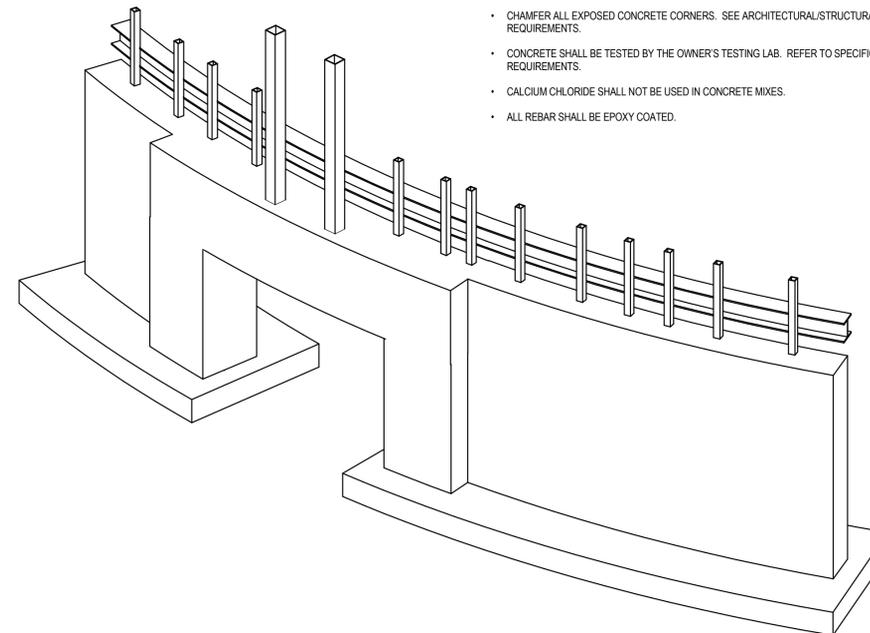
- FORMWORK SHALL BE DESIGNED IN ACCORDANCE WITH THE ACI "MANUAL OF CONCRETE PRACTICE", LATEST EDITION.
- REINFORCING STEEL SHALL BE DETAILED AND PLACED IN ACCORDANCE WITH THE ACI "MANUAL OF CONCRETE PRACTICE", LATEST EDITION, UNLESS OTHERWISE NOTED.
- LAP ALL WALL BARS 36 DIAMETERS UNLESS OTHERWISE DETAILED.
- PROVIDE PIER AND WALL DOWELS OF THE SAME SIZE AND NUMBER AS THE RESPECTIVE PIER AND WALL REINFORCING UNLESS OTHERWISE DETAILED.
- PROVIDE TWO #4 BARS AS STIRRUP CARRY BARS WHERE NO TOP STEEL IS AVAILABLE TO HOLD STIRRUPS.
- WHEREVER AN APPROVED PIPE OR CONDUIT EXTENDS THROUGH A BEAM, PROVIDE ONE ADDITIONAL STIRRUP ON EACH SIDE OF THE OPENING.
- CONCRETE PROTECTION FOR REINFORCING BARS SHALL BE IN ACCORDANCE WITH THE "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE", ACI 318-08.
- CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST 24 HOURS PRIOR TO PLACING CONCRETE.
- DO NOT PLACE OR CUT HOLES IN CONCRETE WALLS, BEAMS OR PIERS WITHOUT PRIOR APPROVAL OF THE ENGINEER.
- EXTERIOR EXPOSED CONCRETE SHALL BE AIR-ENTRAINED. AIR CONTENT SHALL BE 6 PERCENT (+/- 1/2 PERCENT).
- PIPES AND CONDUITS EMBEDDED IN OR PASSING THROUGH STRUCTURAL MEMBERS MUST BE APPROVED BY THE STRUCTURAL ENGINEER. PIPE AND CONDUITS EMBEDDED IN CONCRETE SHALL NOT BE LARGER THAN 2 INCHES IN OUTSIDE DIAMETER AT THEIR WIDEST POINT OR FITTING OR 1/3 OF THE THICKNESS OF THE SLAB, BEAM OR WALL.
- ELECTRICAL CONDUIT OR PIPES EMBEDDED IN OR PASSING THROUGH BEAMS OR WALLS SHALL BE LOCATED AND PLACED SO THAT:
  - THEY ARE NOT CLOSER THAN THREE DIAMETERS ON CENTER.
  - THE CONCRETE COVER IS NOT LESS THAN 2 INCHES.
  - THEY RUN BETWEEN REINFORCING AND DO NOT DISPLACE IT IN ANY MANNER.
- ALUMINUM CONDUITS SHALL NOT BE PLACED IN CONCRETE.
- CHAMFER ALL EXPOSED CONCRETE CORNERS. SEE ARCHITECTURAL/STRUCTURAL DRAWINGS FOR REQUIREMENTS.
- CONCRETE SHALL BE TESTED BY THE OWNER'S TESTING LAB. REFER TO SPECIFICATIONS FOR REQUIREMENTS.
- CALCIUM CHLORIDE SHALL NOT BE USED IN CONCRETE MIXES.
- ALL REBAR SHALL BE EPOXY COATED.

## STRUCTURAL STEEL:

- ALL STRUCTURAL STEEL SHALL BE CORTEN WEATHERING STEEL.
- STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED, AND ERECTED IN ACCORDANCE WITH THE AISC "STEEL CONSTRUCTION MANUAL", THIRTEENTH EDITION, AND THE AISC "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES", MARCH 18, 2005 EDITION.
- WHERE INDICATED ON DRAWINGS, STRUCTURAL AND MISCELLANEOUS STEEL WHICH SHALL REMAIN EXPOSED TO VIEW SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE AISC "SPECIFICATION FOR ARCHITECTURALLY EXPOSED STRUCTURAL STEEL", LATEST EDITION, WITHOUT GAPS OR OPEN JOINTS.
- ALL WELDING SHALL COMPLY WITH AWS D1.1 USING E70XX ELECTRODES. SEE SPECIFICATIONS. ALL WELDING TO BE DONE BY AWS PREQUALIFIED WELDERS, CERTIFIED FOR WELDS MADE. PROVIDE CONTINUOUS MINIMUM SIZED WELDS PER AISC REQUIREMENTS, UNLESS NOTED OTHERWISE.
- THE MINIMUM SIZE OF FILLET WELDS SHALL BE AS SPECIFIED IN TABLE J2.4 IN THE AISC "STEEL CONSTRUCTION MANUAL".
- MINIMUM STRENGTH OF WELDED CONNECTIONS: UNLESS NOTED OTHERWISE ON THE DRAWINGS, ALL SHOP AND FIELD WELDS SHALL DEVELOP THE FULL TENSILE STRENGTH OF THE MEMBER OF ELEMENT JOINED. ALL MEMBERS WITH MOMENT CONNECTIONS, NOTED ON THE DRAWINGS, SHALL BE WELDED TO DEVELOP THE FULL FLEXURAL CAPACITY OF THE MEMBER, UNLESS NOTED OTHERWISE ON THE DRAWINGS.
- WHILE THE DESIGN DOCUMENTS MAY REFERENCE OSHA, THEY ARE NOT INTENDED TO SPECIFICALLY IDENTIFY ALL APPLICABLE OSHA REQUIREMENTS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO IDENTIFY AND COMPLY WITH ALL APPLICABLE OSHA REQUIREMENTS.
- REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL MISCELLANEOUS STEEL.

## MISCELLANEOUS:

- DIMENSIONS OF EXISTING CONSTRUCTION OR CONSTRUCTION IN PROGRESS SHALL BE VERIFIED AND COORDINATED PRIOR TO FABRICATION OF STRUCTURAL COMPONENTS.
- VERIFY AND COORDINATE, WITH ALL CONTRACTORS, THE LOCATION OF ALL ARCHITECTURAL AND MECHANICAL APPURTENANCES AND OPENINGS.
- CONTRACTOR SHALL PROVIDE SHOP DRAWINGS FOR THE FOLLOWING ITEMS PRIOR TO FABRICATION: REBAR, CONCRETE MIX DESIGN, STRUCTURAL STEEL.



ISOMETRIC

ESTIMATE OF QUANTITIES			REDEVELOPMENT AUTHORITY OF THE CITY OF MILWAUKEE MILWAUKEE, WISCONSIN	
ITEM NO.	QUANTITY	DESCRIPTION		
			<b>GENERAL NOTES</b> IN <b>W. CAPITOL DRIVE</b> FROM <b>RAILROAD TRACKS</b> TO	
SCALE: HORIZONTAL <b>N/A</b> VERTICAL <b>N/A</b>			APPROVED	DATE
1/4" SEC. NO.			DESIGN ENGINEER	
PLAN DATE				
DESIGNED BY				
DRAWN BY				
CHECKED BY			ENGINEER IN CHARGE	
SYSTEM NO.				
EASEMENT NO.			CITY ENGINEER & SPECIAL DEPUTY COMMISSIONER OF PUBLIC WORKS	
CONTRACT NO.			PROJECT NO. <b>N/A</b>	C.C. FILE NO. <b>N/A</b>
PROJ. ID. <b>XXX</b>			OFF. NOTICE NO. <b>N/A</b>	DATE ADOPTED <b>N/A</b>
			<b>SHEET NO. 11 OF 14</b> PLAN FILE NO. <b>000-00</b>	

LINE CODE LEGEND			
GAS	G	COMMUNICATIONS	COM
ELECTRIC	E	SANITARY SEWER	SAN
TELEPHONE	T	STORM SEWER	STO
CABLE TELEVISION	TV	COMBINED SEWER	CSB
FIBER OPTICS	FO	SEW. DISTRICT SEWER	MMSD
CITY UNDERGROUND CONDUIT	CUC	WATER MAIN	W
		STREET LIGHTING	SL
		PAVING LIMITS	X X X X
		STRUCTURE / BUILDING	
		FENCE	
		STEAM	ST

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1-800-242-8511

TOLL FREE TO OBTAIN LOCATION OF UNDERGROUND BEFORE YOU DIG. WISCONSIN STATUTE 182.015 REQUIRES MIN. OF 3 WORK DAYS NOTICE BEFORE YOU EXCAVATE

One Honey Creek Corporate Center  
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Milwaukee, WI  
53214-1470  
414/258 1500  
414/259 0037 fax  
[www.graeef-usa.com](http://www.graeef-usa.com)

GRAEF

NO.	BY	REVISION	DATE
AS BUILT CONTRACT NO.		DATE ENTD.	

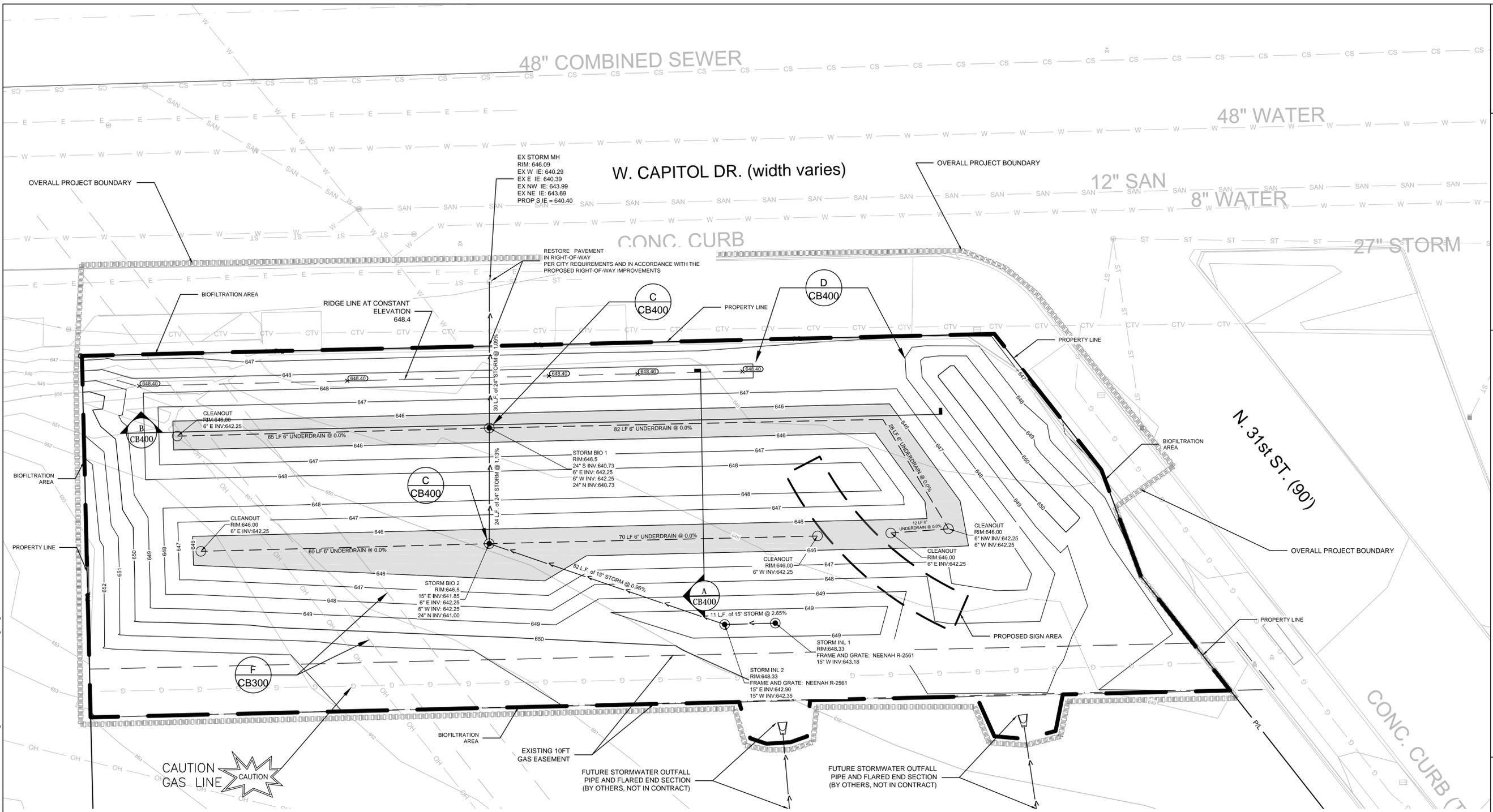








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REDEVELOPMENT AUTHORITY OF THE CITY OF MILWAUKEE  
 CENTURY CITY NORTH END IMPROVEMENTS  
 ZONE #1 AND BIOFILTRATION AREA

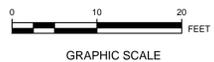
**BIOFILTRATION AREA  
 GRADING & UTILITY PLAN**

**GENERAL NOTES:**

1. THE UNDERGROUND UTILITY INFORMATION SHOWN ON THIS DRAWING IS BASED ON FIELD LOCATIONS AND/OR RECORDS FURNISHED BY MUNICIPALITIES AND UTILITY COMPANIES. THE LOCATION AND ACCURACY OF WHICH CANNOT BE GUARANTEED. THERE MAY BE ADDITIONAL UNDERGROUND UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.
2. VERIFY ACTUAL LOCATIONS AND INVERTS IN THE FIELD. ANY POTENTIAL ERRORS, OMISSIONS, OR DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO PROCEEDING WITH CONSTRUCTION.
3. WORK TO BE COMPLETED IS INDICATED IN BOLD TYPE LINES AND EXISTING CONDITIONS ARE INDICATED BY LIGHT TYPE LINES.
4. ELECTRONIC CIVIL FILES ARE AVAILABLE UPON WRITTEN REQUEST. DO NOT USE ELECTRONIC CIVIL FILES TO LAYOUT FOUNDATIONS, COLUMN LINES, LIGHT POLES, OR OTHER NON CIVIL SITE WORK. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS OF BUILDING AND ARCHITECTURAL FEATURES.
5. WORK IN PUBLIC RIGHT OF WAY SHALL FOLLOW MATERIAL AND INSTALLATION REQUIREMENTS PER CITY MILWAUKEE.
6. REMOVE EXISTING ABOVE AND BELOW GRADE IMPROVEMENTS AS NECESSARY TO FACILITATE NEW CONSTRUCTION.
7. VERTICAL DATUM FOR THE PROJECT IS NGVD 29. SUBTRACT 580.6 TO CONVERT TO CITY OF MILWAUKEE VERTICAL DATUM.
8. REFER TO DETAIL "E" SHEET CB300 FOR EROSION MATTING REQUIREMENTS
9. REFER TO LANDSCAPE PLANS AND DETAILS FOR PLANTING REQUIREMENTS.

**LEGEND:**

- PROPOSED SURFACE ELEVATION
- EXISTING CONTOUR
- PROPOSED CONTOUR
- ENGINEERED SOIL AREA



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 TOLL FREE  
 MS STATUTE 182.07(1)(b)  
 REQUIRES MIN. 3 WORK DAYS  
 NOTICE BEFORE YOU DIG  
 MILW. AREA 259-1181

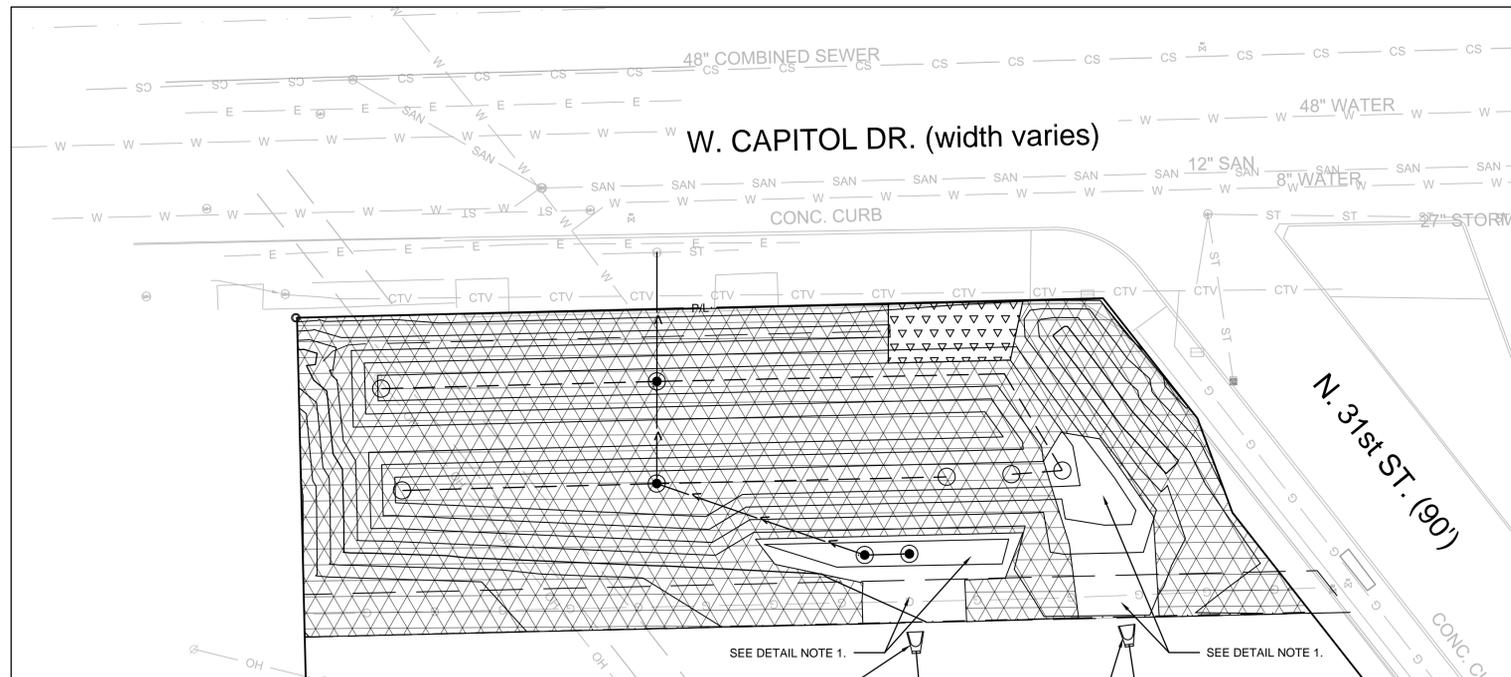
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DRAWN BY:	ABH
DATE:	03-12-15
PROJECT NO:	14506
CHECKED BY:	ABH
APPROVED BY:	ABH
SHEET NO.:	

**CB 200**

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REQUIRES MIN. 3 WEEKS ADVANCE  
NOTICE BEFORE YOU DIG/DATE  
MILW. AREA 259-1181



**DETAIL NOTES:**

- ADJUST EROSION MATTING TO ACCOMMODATE STORM SEWER OUTFALL FEATURES SHOWN ON THE LANDSCAPING PLAN.
- EROSION MATTING SHALL BE ANCHORED, OVERLAPPED, STAKED AND ENTRENCHED PER MANUFACTURER'S RECOMMENDATIONS.

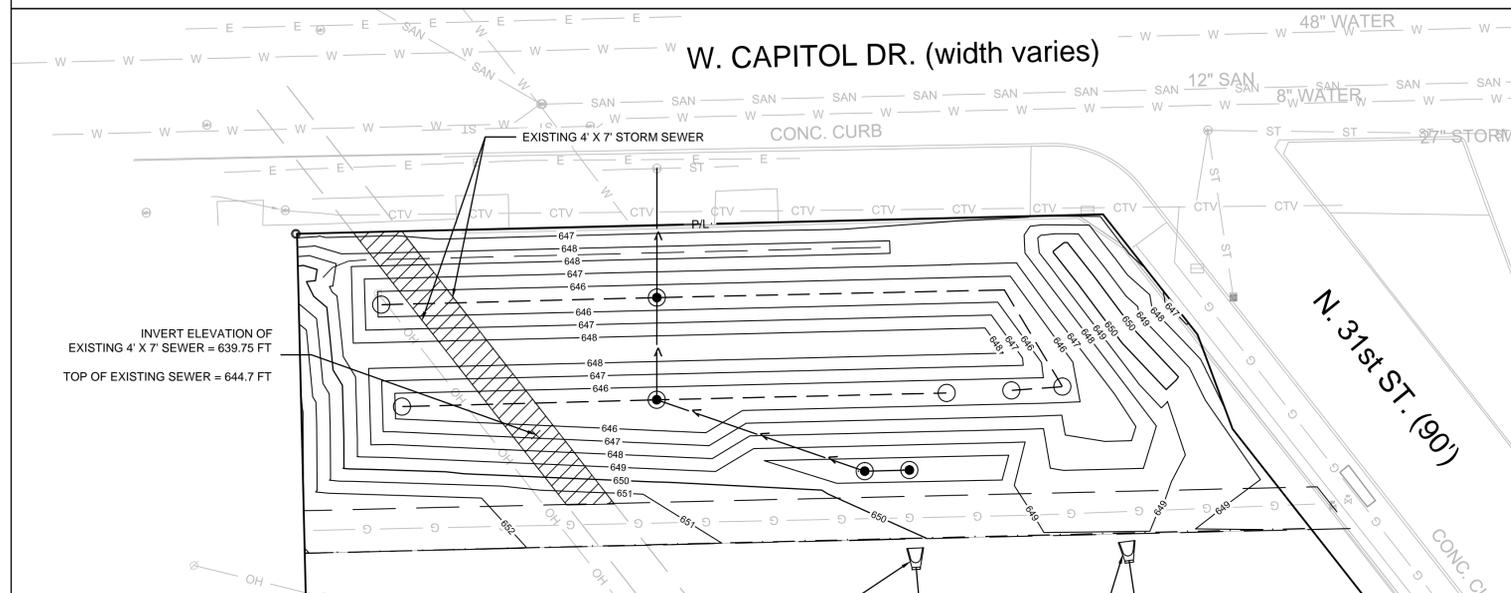
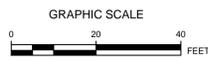
**E EROSION MATTING DETAIL**

FUTURE OUTFALL PIPE AND FLARED END SECTION (BY OTHERS)

FUTURE OUTFALL PIPE AND FLARED END SECTION (BY OTHERS)

**LEGEND:**

- EXISTING CONTOUR
- PROPOSED CONTOUR
- WISDOT EROSION MAT CLASS II TYPE B BIODEGRADABLE
- EROSION MAT OVER ECRM. SEE DETAIL D SHEET CB 400.



**NOTES:**

- REMOVE EXISTING 4' X 7' STORM SEWER PIPE TO THE EXTENT NECESSARY TO FACILITATE CONSTRUCTION OF THE BIOFILTRATION AREA.

**F PIPE REMOVAL DETAIL**

FUTURE OUTFALL PIPE AND FLARED END SECTION (BY OTHERS)

FUTURE OUTFALL PIPE AND FLARED END SECTION (BY OTHERS)

**LEGEND:**

- EXISTING CONTOUR
- PROPOSED CONTOUR
- HORIZONTAL REMOVAL EXTENT



**GENERAL NOTES:**

- THE UNDERGROUND UTILITY INFORMATION SHOWN ON THIS DRAWING IS BASED ON FIELD LOCATIONS AND/OR RECORDS FURNISHED BY MUNICIPALITIES AND UTILITY COMPANIES. THE LOCATION AND ACCURACY OF WHICH CANNOT BE GUARANTEED. THERE MAY BE ADDITIONAL UNDERGROUND UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.
- VERIFY ACTUAL LOCATIONS AND INVERTS IN THE FIELD. ANY POTENTIAL ERRORS, OMISSIONS, OR DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO PROCEEDING WITH CONSTRUCTION.
- WORK TO BE COMPLETED IS INDICATED IN BOLD TYPE LINES AND EXISTING CONDITIONS ARE INDICATED BY LIGHT TYPE LINES.
- ELECTRONIC CIVIL FILES ARE AVAILABLE UPON WRITTEN REQUEST. DO NOT USE ELECTRONIC CIVIL FILES TO LAYOUT FOUNDATIONS, COLUMN LINES, LIGHT POLES, OR OTHER NON CIVIL SITE WORK. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS OF BUILDING AND ARCHITECTURAL FEATURES.
- WORK IN PUBLIC RIGHT OF WAY SHALL FOLLOW MATERIAL AND INSTALLATION REQUIREMENTS PER CITY MILWAUKEE.
- VERTICAL DATUM FOR THE PROJECT IS NGVD 29. SUBTRACT 580.6 TO CONVERT TO CITY OF MILWAUKEE VERTICAL DATUM.
- REFER TO LANDSCAPE PLANS AND DETAILS FOR PLANTING REQUIREMENTS.
- REFER TO "SOIL MANAGEMENT PLAN FOR BIOFILTRATION AREA" FOR HANDLING OF SOILS.

**STORM DRAINAGE SPECIFICATIONS:**

- STORM SEWER WORK SHALL BE IN ACCORDANCE WITH THE DEPARTMENT OF SAFETY AND PROFESSIONAL SERVICES (DPS) PLUMBING CODE - CHAPTERS SPS 382 AND SPS 384 AND CITY REQUIREMENTS.
- STORM PIPING SHALL BE PVC. PVC SEWER PIPE AND FITTINGS: ASTM D 3034, SDR 35, WITH BELL-AND-SPIGOT ENDS WITH RUBBER GASKETED JOINTS IN ACCORDANCE WITH CHAPTER 8.10.0 OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN (STANDARD SPECIFICATIONS), LATEST EDITION. JOINTS SHALL CONFORM TO ASTM D-3212.
- FRAMES AND GRATES: AS INDICATED ON PLANS. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING SPECIFIED FRAME/GRATE IS COMPATIBLE WITH STRUCTURE; IF NOT, NOTIFY ENGINEER.
- MANHOLES: STANDARD PRECAST REINFORCED CONCRETE MANHOLES CONFORMING TO ASTM C478, SECTION 8.39.0 OF THE STANDARD SPECIFICATIONS AND CONFORMING TO FILE NOS. 12, 13 AND 15 OF THE STANDARD SPECIFICATIONS. DIAMETER AND DEPTH AS INDICATED ON PLANS. MANHOLE SIZES TO BE VERIFIED BY CONTRACTOR AND SHOP DRAWINGS SHALL BE PROVIDED TO THE ENGINEER FOR REVIEW PRIOR TO ORDERING STRUCTURES.
- MANHOLES AND CATCH BASINS DEEPER THAN FOUR FEET SHALL BE PROVIDED WITH MANHOLE STEPS CONFORMING TO SECTION 8.40.0 OF THE STANDARD SPECIFICATIONS.
- SEWERS SHALL BE INSTALLED IN CONFORMANCE WITH SECTION 3.2.0 OF THE STANDARD SPECIFICATIONS. INSTALL PROPER SIZE INCREASERS, REDUCERS AND COUPLINGS WHERE DIFFERENT SIZES OR MATERIALS OF PIPES AND FITTINGS ARE CONNECTED. INSTALL TRACER PIPE OVER NON-METALLIC PIPING IN ACCORDANCE WITH SPS SECTION 382.30(1)(H) AND 382.36(7)(D).
- PROVIDE AND INSTALL CLEANOUTS IN ACCORDANCE WITH SPS CHAPTER 382.35. INSTALL CLEANOUTS AND RISER EXTENSIONS FROM SEWER PIPES TO PROPOSED GRADE. INSTALL PIPING SO CLEANOUTS OPEN IN DIRECTION OF FLOW IN SEWER PIPE. USE HEAVY DUTY, TOP-LOADING CLASSIFICATION CLEANOUTS.
- BEDDING AND BACKFILL IN PUBLIC RIGHT OF WAY SHALL BE IN ACCORDANCE WITH CITY REQUIREMENTS AND SPECIFICATIONS.
- MANHOLE INSTALLATION SHALL BE IN ACCORDANCE WITH SECTION 3.5.0 OF THE STANDARD SPECIFICATIONS. SET MANHOLE RIMS TO ELEVATIONS INDICATED ON PLANS.



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REDEVELOPMENT AUTHORITY OF THE CITY OF MILWAUKEE  
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ZONE #1 AND BIOFILTRATION AREA

BIOFILTRATION AREA  
DETAILS AND SPECIFICATIONS

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DATE: 03-12-15

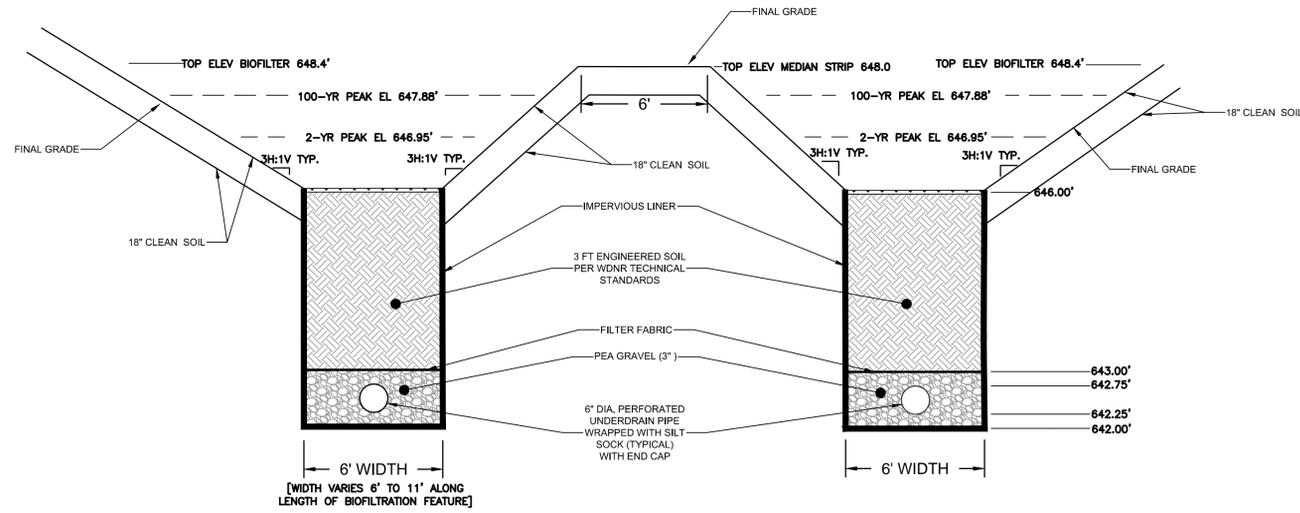
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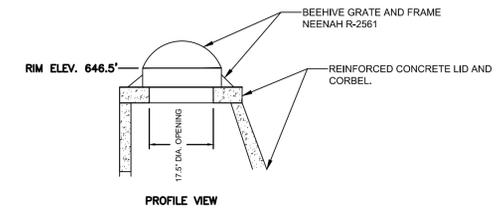
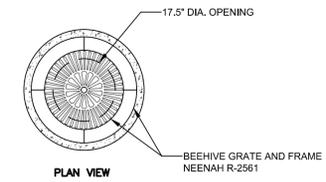
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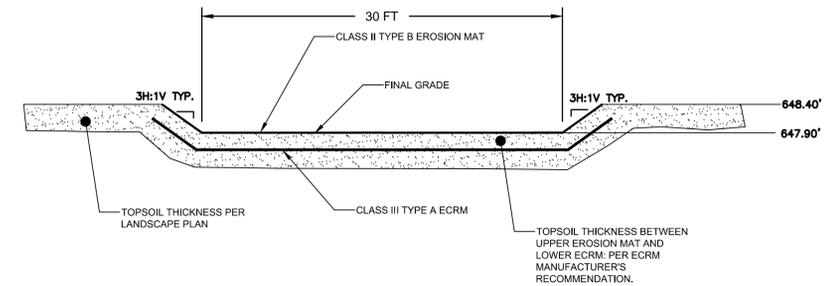
**CB 300**



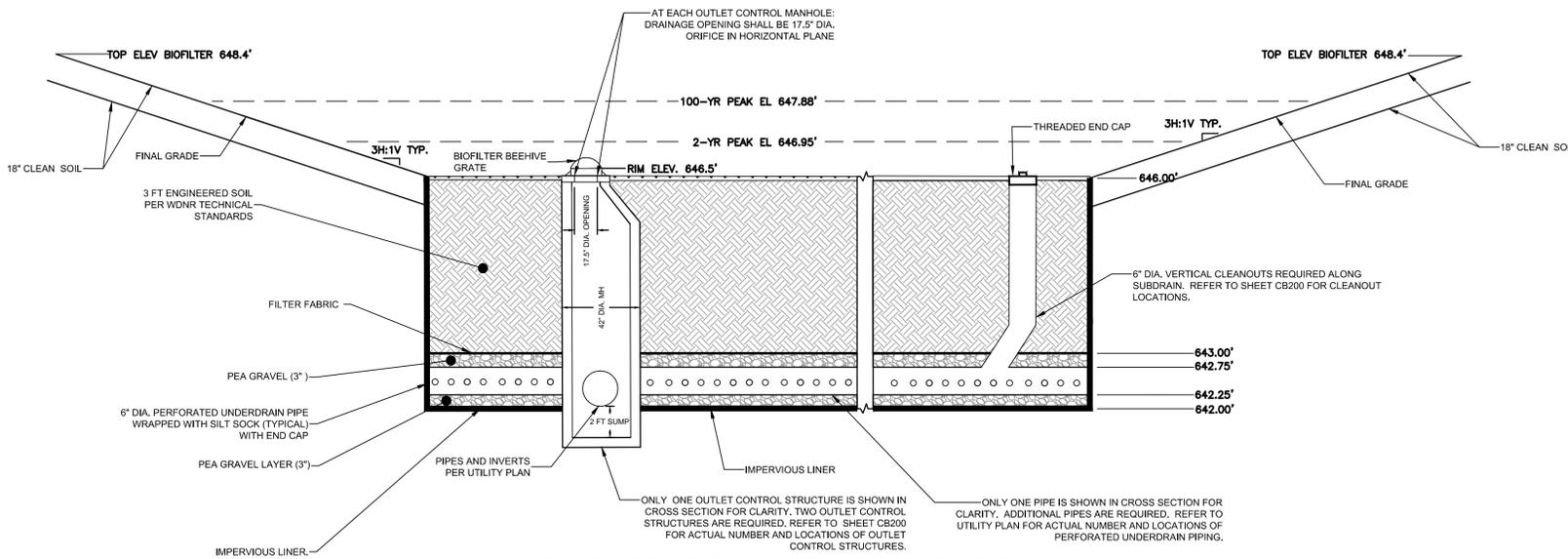
**A** BIOFILTRATION AREA - N/S SECTION VIEW  
NOT TO SCALE



**C** BIOFILTRATION AREA - GRATE DETAIL  
NOT TO SCALE



**D** SPILLWAY  
PROFILE VIEW  
NOT TO SCALE



**B** BIOFILTRATION AREA - E/W SECTION VIEW  
NOT TO SCALE

**SPECIFICATIONS - BIOFILTRATION AREA:**

- CONSTRUCTION SITE RUNOFF FROM DISTURBED AREAS SHALL NOT BE ALLOWED TO ENTER THE BIORETENTION DEVICE.
- RUNOFF FROM PERVIOUS AREAS SHALL BE DIVERTED FROM THE DEVICE UNTIL THE PERVIOUS AREAS HAVE UNDERGONE FINAL STABILIZATION.
- CONSTRUCT TEMPORARY DIVERSION SWALES OR PROVIDE OTHER MEANS AS NECESSARY TO PREVENT CONSTRUCTION SITE RUNOFF FROM DISTURBED AREAS, AND RUNOFF FROM PERVIOUS AREAS WHICH HAVE NOT YET BEEN STABILIZED, FROM ENTERING THE BIORETENTION AREA.
- BIORETENTION CONSTRUCTION SHALL BE SUSPENDED DURING PERIODS OF RAINFALL OR SNOWMELT. CONSTRUCTION SHALL REMAIN SUSPENDED IF PONDED WATER IS PRESENT OR IF RESIDUAL SOIL MOISTURE CONTRIBUTES SIGNIFICANTLY TO THE POTENTIAL FOR SOIL SMEARING, CLUMPING OR OTHER FORMS OF COMPACTION.
- COMPACTION OF THE ENGINEERED SOILS AND TOPSOIL USED IN THE SOIL PLANTING BED SHALL BE MINIMIZED. DURING SITE DEVELOPMENT, THE AREA DEDICATED TO THE BIORETENTION DEVICE SHALL BE CORDONED OFF TO PREVENT ACCESS BY HEAVY EQUIPMENT. ACCEPTABLE EQUIPMENT FOR CONSTRUCTING THE BIORETENTION DEVICE INCLUDES EXCAVATION HOES, LIGHT EQUIPMENT WITH TURF TYPE TIRES, MARSH EQUIPMENT OR WIDE-TRACK LOADERS.
- PRIOR TO PLACEMENT IN THE BIORETENTION DEVICE, THE ENGINEERED SOIL SHALL BE PREMIXED AND THE MOISTURE CONTENT SHALL BE LOW ENOUGH TO PREVENT CLUMPING AND COMPACTION DURING PLACEMENT.
- THE ENGINEERED SOIL SHALL BE PLACED IN MULTIPLE LIFTS, EACH APPROXIMATELY 12 INCHES IN DEPTH.
- STEPS MAY BE TAKEN TO INDUCE MILD SETTLING OF THE ENGINEERED SOIL BED AS NEEDED TO PREPARE A STABLE PLANTING MEDIUM AND TO STABILIZE THE PONDING DEPTH. VIBRATING PLATE-STYLE COMPACTORS SHALL NOT BE USED TO INDUCE SETTLING.
- ENGINEERED SOIL AND GRAVEL SHALL BE IN ACCORDANCE WITH THE LATEST WDNR TECHNICAL STANDARD 1004.
- IMPERVIOUS LINER SHALL BE 45 MIL FIRESTONE EPDM (GSI PRODUCTS), OR 30 MIL PVC (GSI PRODUCTS), OR EQUAL.

REDEVELOPMENT AUTHORITY OF THE CITY OF MILWAUKEE  
CENTURY CITY NORTH END IMPROVEMENTS  
ZONE #1 AND BIOFILTRATION AREA

BIOFILTRATION AREA  
DETAILS AND SPECIFICATIONS

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DATE: 03-12-15

PROJECT NO: 14506

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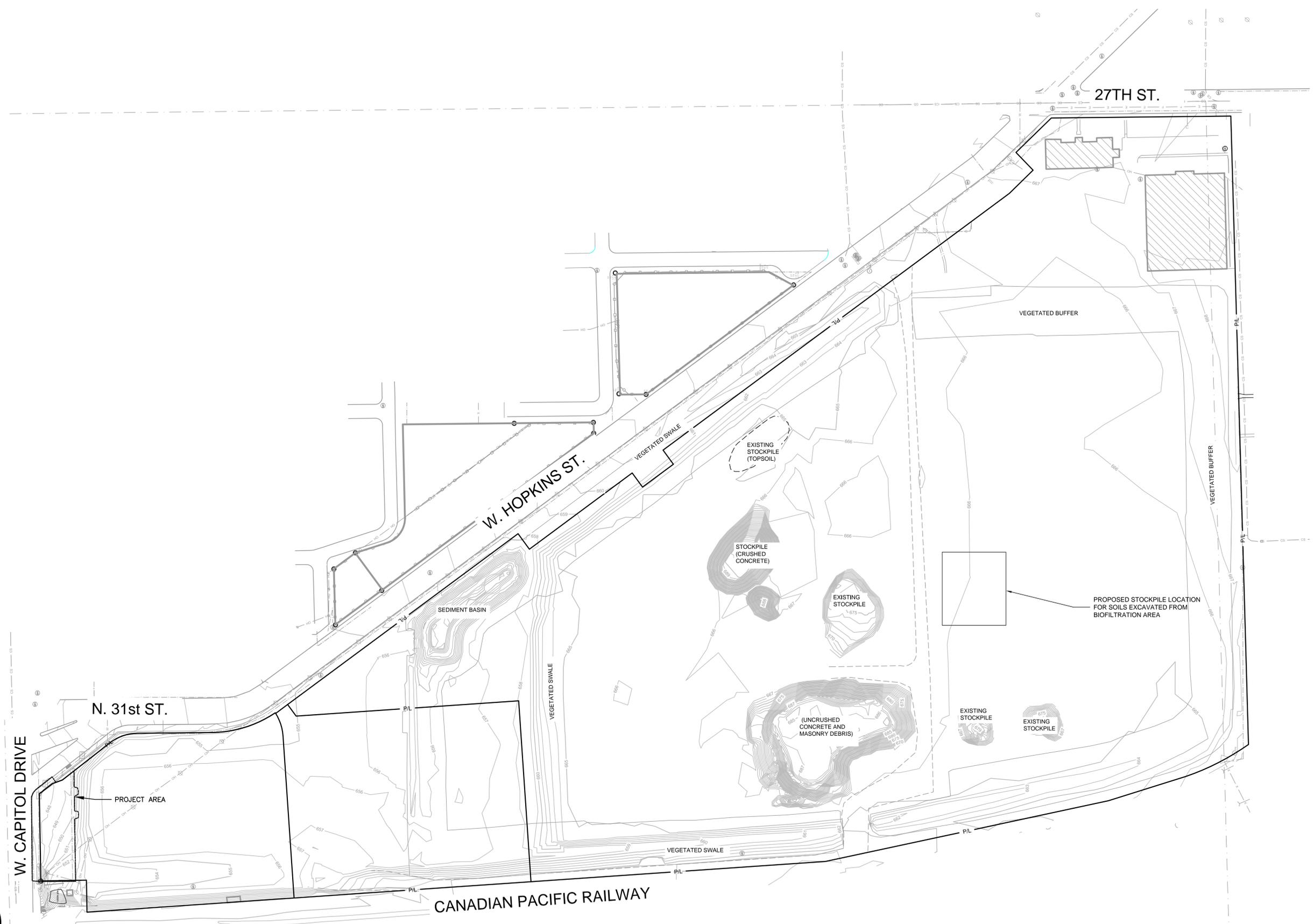
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**CB 400**

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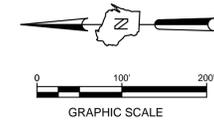


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THE INFORMATION PROVIDED IN THESE DOCUMENTS ABOUT EXISTING CONDITIONS IS BASED ON A COMBINATION OF FIELD DATA AND OTHER AVAILABLE RECORD DATA. THERE IS NO GUARANTEE RELATIVE TO THE ACCURACY OR COMPLETENESS OF THE INFORMATION REGARDING EXISTING CONDITIONS.

**LEGEND:**  
 — P/L — PROPERTY LINE  
 - - - 667 - - - EXISTING CONTOUR



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 ZONE #1 AND BIOFILTRATION AREA

**STOCKPILE AREA**

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SHEET NO.:	

**CB 500**