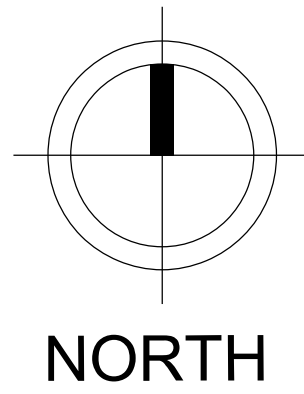


CONTACT NUMBERS

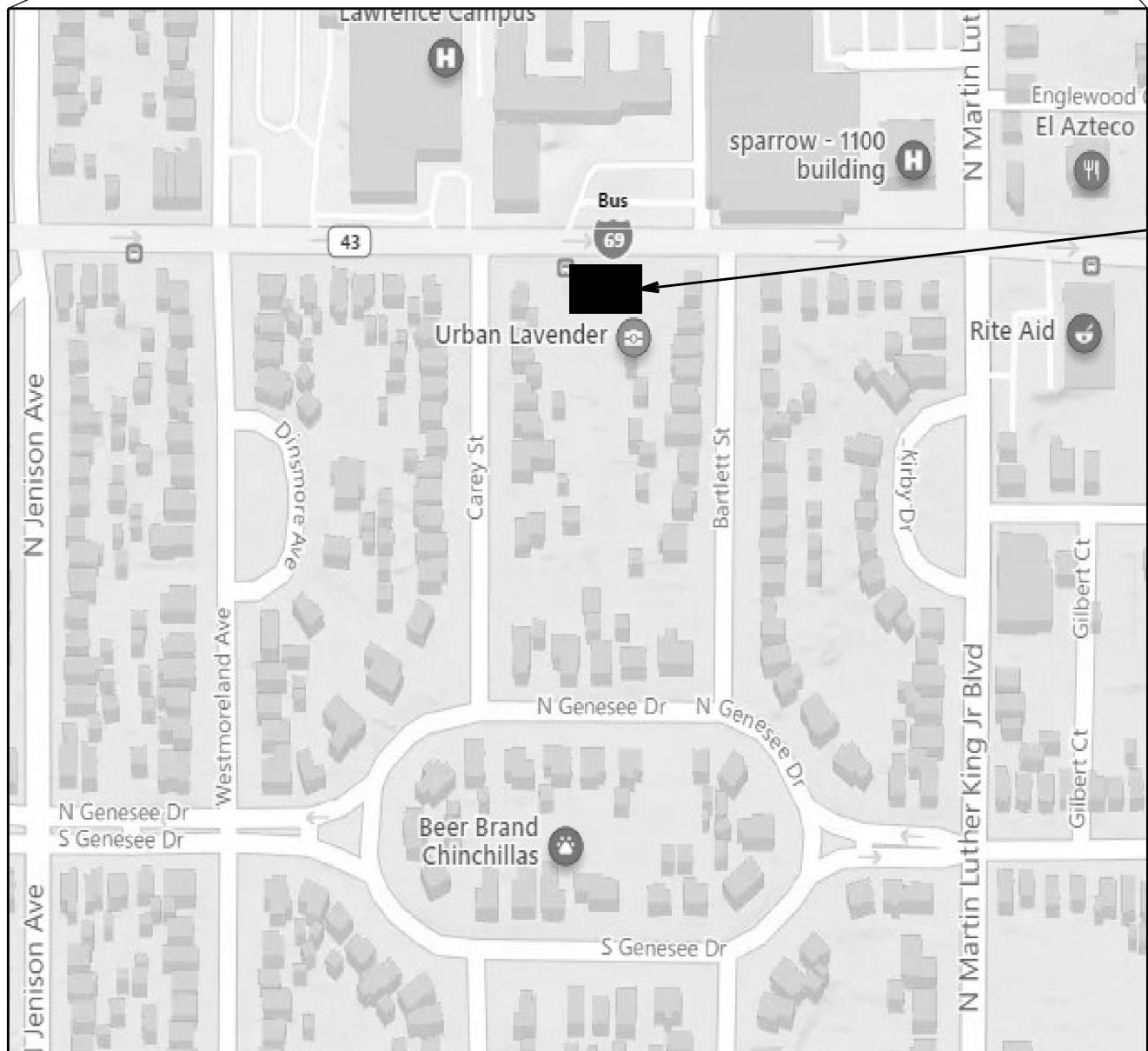
PLANNING AND ZONING
CONTACT: CITY OF LANSING
PHONE: 517-483-4048

ENGINEERING/PUBLIC SERVICE
CONTACT: CITY OF LANSING
PHONE: 517-483-4455

INGHAM COUNTY LAND BANK
POINTE WEST CONDOMINIUMS
LOCATED IN
CITY OF LANSING, INGHAM COUNTY, MICHIGAN

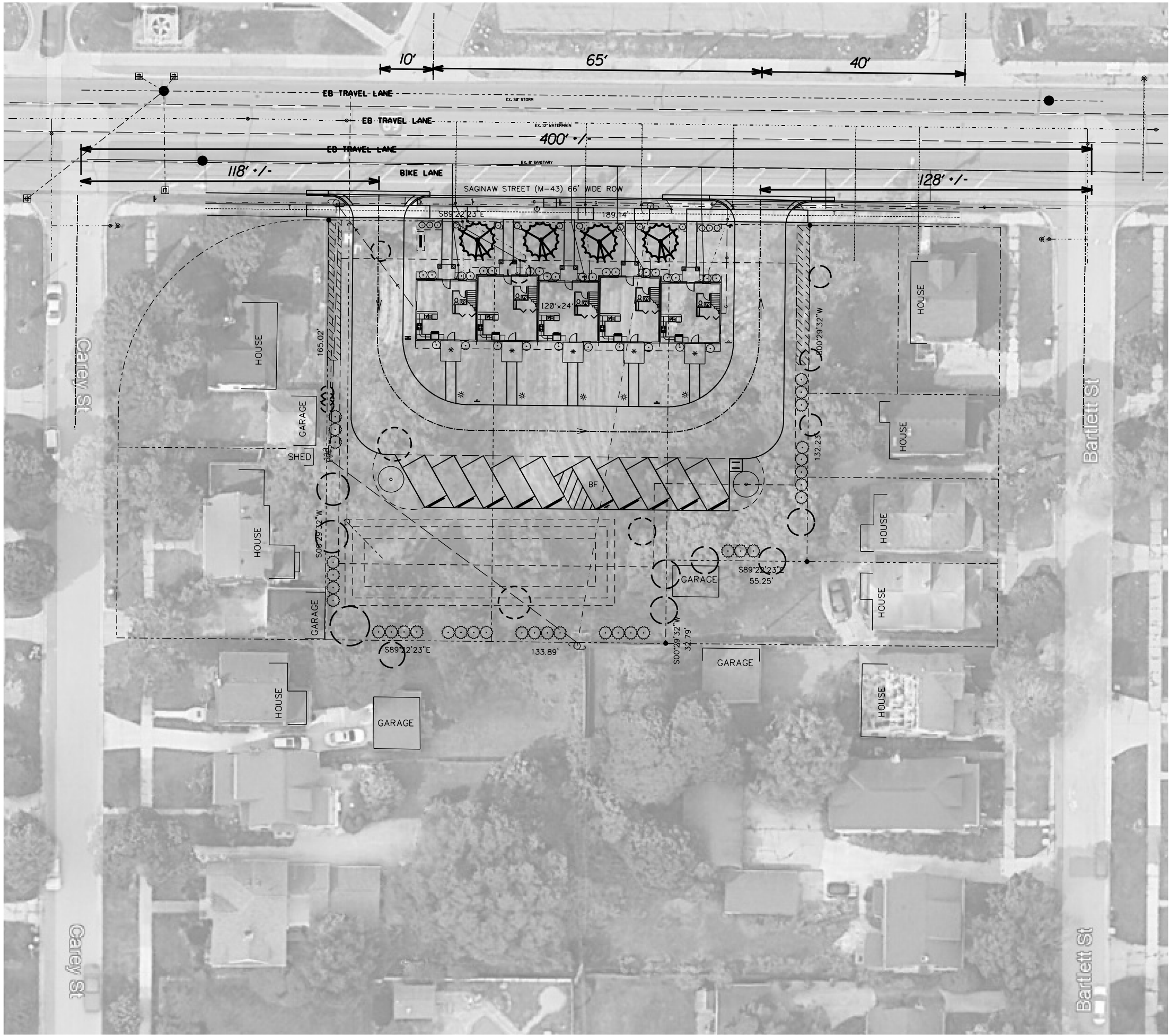


VICINITY MAP
NOT TO SCALE



LOCATION MAP
NOT TO SCALE

PROJECT
LOCATION



SITE LAYOUT
NOT TO SCALE

ALL WORK WITHIN THE SAGINAW HWY ROW
SHALL BE COMPLETED IN ACCORDANCE WITH MDOT &
THE CITY OF LANSING RULES, REGULATIONS,
AND GUIDELINES AND AS PERMITTED THEREIN

CITY OF LANSING NOTES:

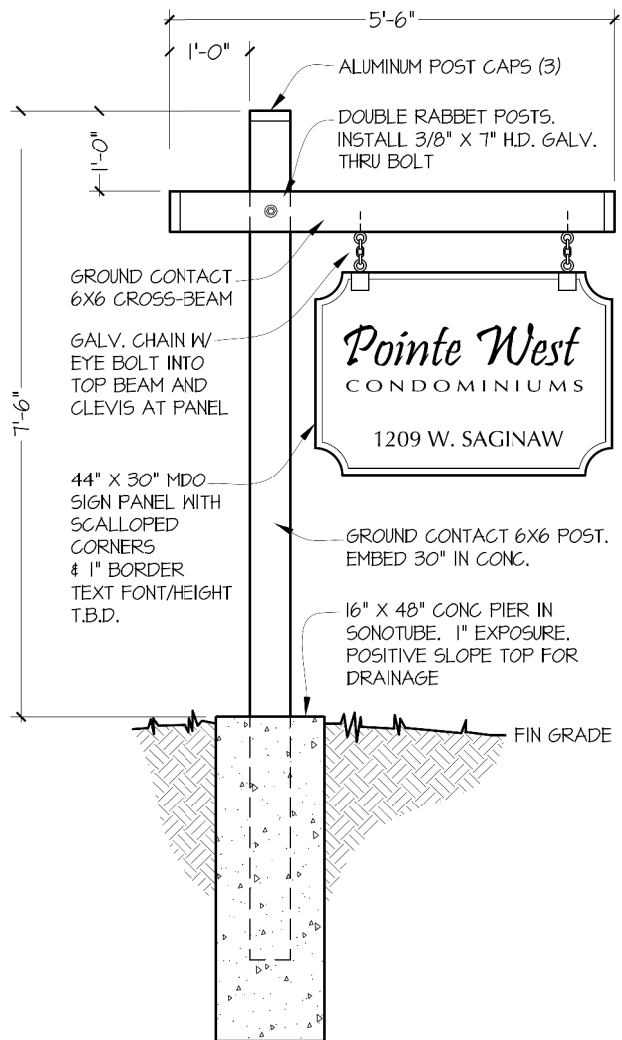
ALL BROKEN AND DAMAGED SIDEWALK ALONG THE PROPERTY RIGHT OF WAY SHALL BE REMOVED AND REPLACED BY OWNER. ALL EXISTING SIDEWALK ON THE PROPOSED SITE DETERMINED TO NOT BE ADA COMPLIANT SHALL BE REMOVED AND REPLACED BY OWNER. SIDEWALK REPLACEMENT SHALL BE ACCORDING TO DETAILS THESE PLANS AND THE CITY OF LANSING STANDARDS.

THE CONTRACTOR SHALL OBTAIN A CITY PERMIT FOR ALL ROAD CUTS WHICH WILL BE BACK FILLED PER CITY STANDARDS TO THE BASE COURSE COMPACTED FINISHED GRADE. HMA PAVEMENT WILL BE REPLACED BY THE CITY AT A PRE-ESTABLISHED PER SQUARE UNIT COST.

CONTRACTOR SHALL OBTAIN CITY PERMIT FOR ALL CONCRETE WORK INCLUDING CURB AND GUTTER, DRIVE APPROACHES AND SIDEWALKS.

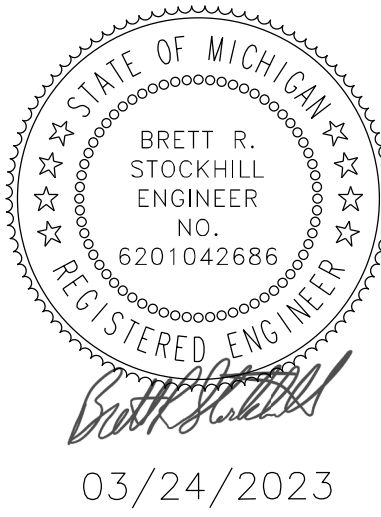
LINE-TYPE LEGEND

SYMBOLS (COLORS ARE REPRESENTED ACCORDING TO MISS DIG)	DESCRIPTION (LINE WEIGHT .0004 UNLESS NOTED OTHERWISE)
	ROAD RIGHT OF WAY
	CONTINUOUS CENTER LINE OF ROAD CENTER
	PROPERTY LINE
	DASHDOT
	GAS MAIN HIDDEN
	CABLE TV HIDDEN
	UNDERGROUND ELECTRIC HIDDEN
	UNDERGROUND TELEPHONE HIDDEN
	FIBER OPTICS HIDDEN
	NEW CONTOUR LINE (THIN BLACK LINE)
	EXISTING CONTOUR LINE (GRAY COLOR)
	WATER BOUNDARY
	PROP. SANITARY SEWER (BOLDEST (.50mm) CONTINUOUS LINETYPE
	PROP. STORM SEWER (BOLD (.30mm) HIDDEN LINETYPE
	PROP. WATER MAIN (BOLDER (.40mm) DIVIDED LINETYPE
	EX. SANITARY SEWER (.25mm) DASHED LINETYPE
	EX. STORM SEWER (.25mm) HIDDEN LINETYPE
	EX. WATER MAIN (.25mm) DIVIDED LINETYPE
	UTILITY EASEMENT HIDDEN LINETYPE
	PROFILE LINE 10' OFF BASELINE
	PROFILE LINE 20' OFF BASELINE
	PROFILE LINE 30' OFF BASELINE



BUILDING SIGNAGE
NOT TO SCALE

SHEET NO.	SHEET	REVISED DATE
C0.0	COVER SHEET	03/24/23
S1.0	EXISTING SITE	03/24/23
C1.0	REMOVALS	03/24/23
C2.0	SITE LAYOUT PLAN	03/24/23
C3.0	GRADING & SESC PLAN	03/24/23
C3.1	STORM WATER CALCULATIONS	03/24/23
C4.0	UTILITY PLAN	03/24/23
C5.0	LANDSCAPE PLAN	03/24/23
C5.1	LIGHTING PLAN	03/24/23
C6.0	SPECIFICATIONS & DETAILS	03/24/23
C7.0	PLAN & PROFILE #6294 SAGINAW STREET	03/24/23



BRS ENGINEERING, LLC
3821 Stoughton Drive
Lansing, MI 48910
Phone: (517) 719-5094
brengeering@comcast.net

BRSE

INGHAM COUNTY LAND BANK
3024 TURNER ROAD
LANSING, INGHAM COUNTY, MI

IFC

REVISIONS	BY	DATE
1	BRS	9/17/22
2	BRS	12/22/22
3	BRS	2/17/23
4	BRS	3/27/23

PROJECT MOD. DATE 9/8/22

DRAWN BY DATE 9/8/22

ENGINEER DATE 9/8/22

CAD FILE EDIT

SCALE NTS

DRAWING

PLOT SCALE

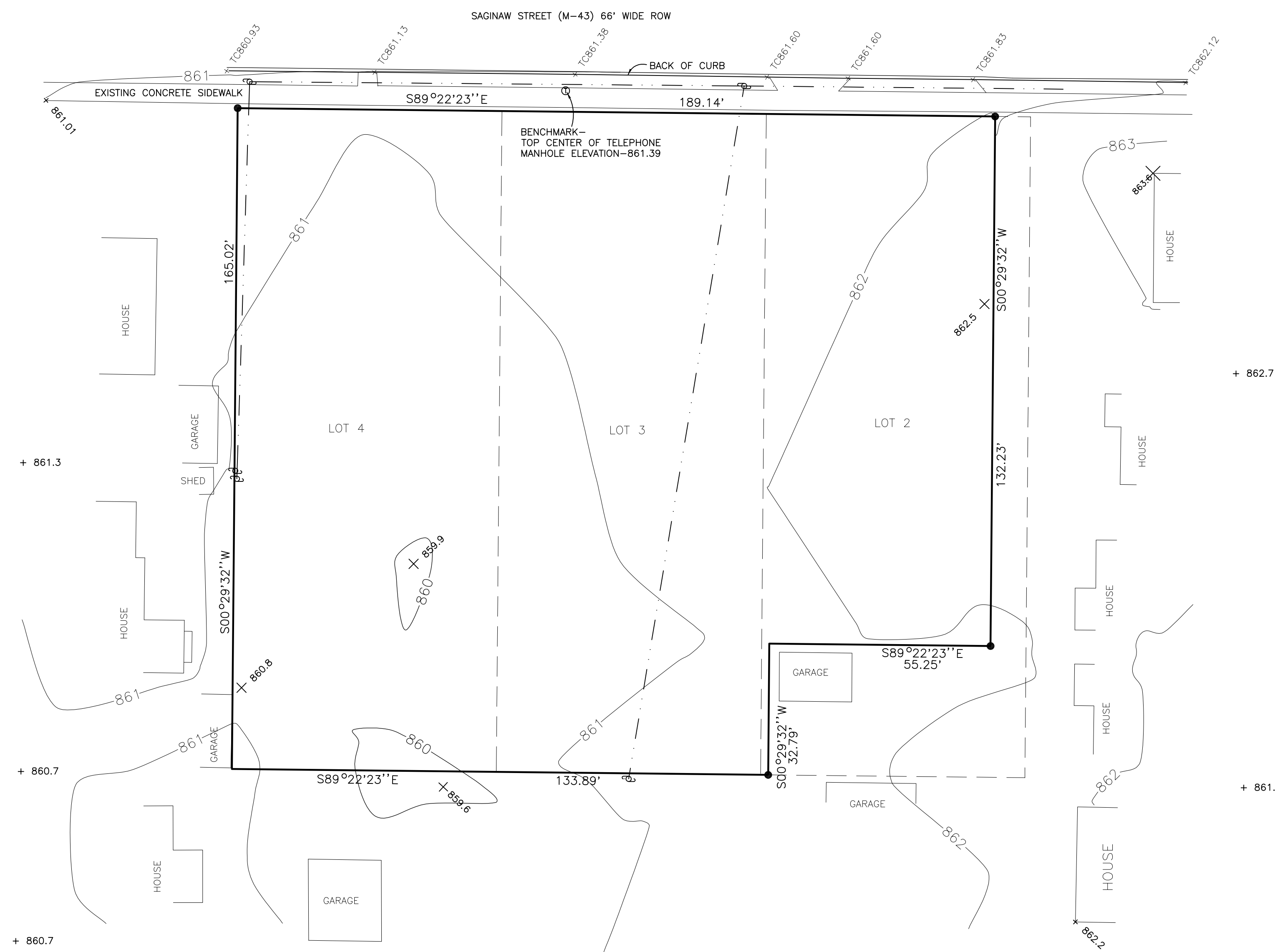
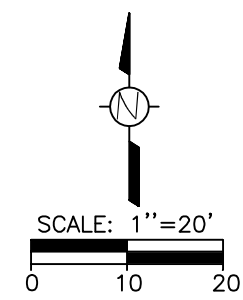
PROJECT 0001

C0.0

SHEET NO.

POINTE WEST CONDOMINIUMS
5-UNITS, 1 BUILDING
1209 W. SAGINAW
LANSING, INGHAM COUNTY, MI

COVER SHEET

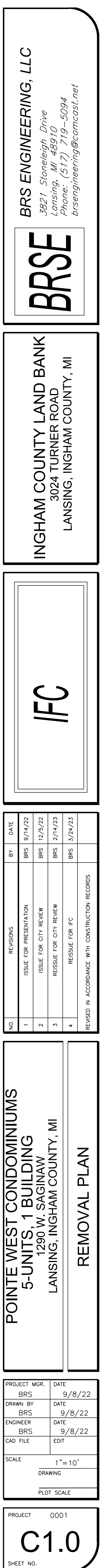


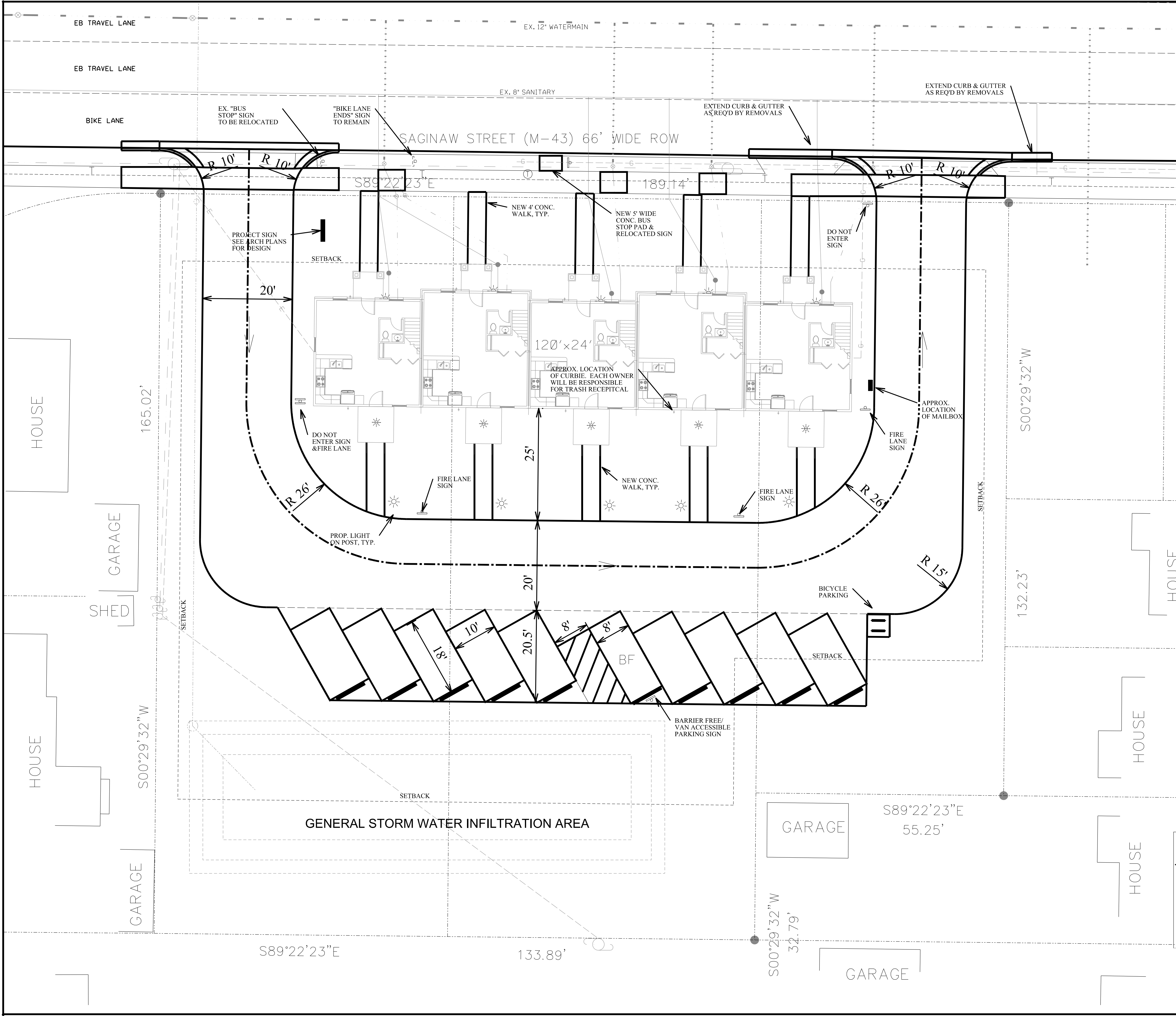
- LEGEND**
- ⊙ TELEPHONE MANHOLE
 - ⊙ UTILITY POLE
 - + 861.7 EXISTING SPOT ELEVATION
 - FOUND SURVEYOR'S MARKER
 - OVERHEAD UTILITIES
 - 900 EXISTING CONTOUR 1' INTERVAL (NAVD)

EXISTING CONDITIONS ON AUGUST 23, 2022

ENGINEERING
805 N. CEDAR PO BOX 87
MASON, MICHIGAN 48854-0087
517-676-6565

LOT 3, 4 AND PART OF LOT 2
M. CAREYS FIRST ADDITION TO THE CITY OF LANSING
NE 1/4, SECTION 17, T4N, R2W, INGHAM COUNTY, MICHIGAN
ESE JOB NO. 33-3467
SHEET 1 OF 1
PLAN DATE- AUGUST 29, 2022





SITE SUMMARY
ADDRESS: 1209 W. SAGINAW HWY
PARCEL ID: 33-01-01-17-204-250
COMBINED PARCELS:
33-01-01-17-204-231
33-01-01-17-204-240
33-01-01-17-204-250

ZONING: RESIDENTIAL C - 2 UNIT
FORM BASED CODE: R-MX
DENSITY: PROP. 5 UNITS (6 ALLOWED)
SETBACKS:
15' FRONT GRANTED
5' SIDE, 15' TOTAL
30' REAR

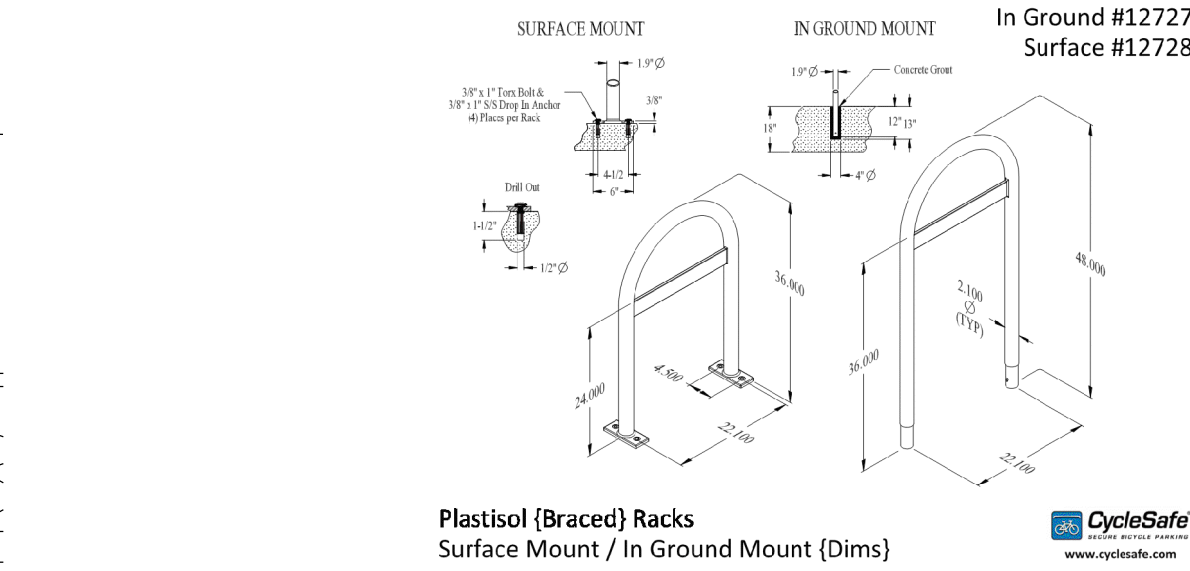
AREAS:
PROPERTY: 29,400 SF (0.67 A)
ASPHALT: 9,120 SF
CONC. WALK: 700 SF
BUILDING: 2,976 SF
OPEN SPACE: 16,604 SF

IMPERVIOUS (60%): 13,861 SF, 43.5%
BUILDING (40%): 10.1%

BUILDING HEIGHT: 20' - 45'

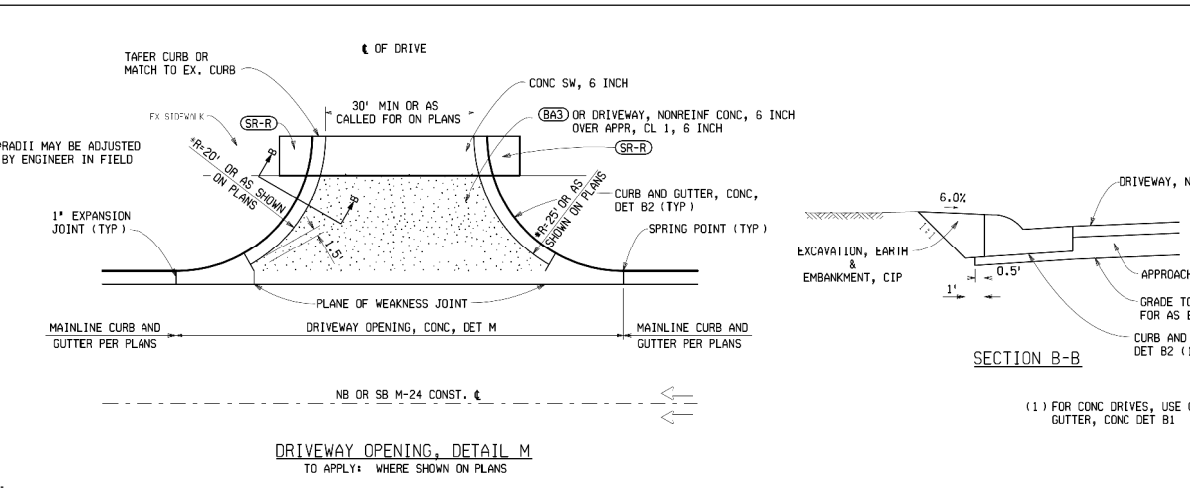
PARKING: 9 SPACES, 10' X 18'
1 BF/VAN ACCESSIBLE, AS SHOWN
20' DRIVE & AISLE
EST. DAILY VEHICLE TRIPS: 20

TRASH: EACH CO-OWNER WILL BE RESPONSIBLE FOR THE RECEIPTAL FOR THAT UNIT.



BENCHMARKS:
T1 B.M. 1211 SET GEAR SPIKE NORTH SIDE P. POLE @ SE CORNER SAGINAW & BARTLETT. ELEV. 862.70
T1 B.M. 1212 SET GEAR SPIKE SOUTH SIDE P. POLE @ SW CORNER SAGINAW & CAREY. ELEV. 861.39

- NOTES:**
1. SIDEWALK REPLACEMENT ACROSS PROPOSED ENTRANCE SHALL BE 7" THICKENED SECTION WITH 3" SAND BASE UNDER ALL PATHWAYS.
 2. THERE ARE NO KNOWN CONTAMINATIONS OR HAZARDOUS MATERIALS ON SITE.
 3. THE PROJECT WILL NOT ADVERSELY AFFECT OR BE HAZARDOUS TO EXISTING NEIGHBORING USES.
 4. NO EASEMENTS ARE KNOWN TO EXIST ON PROPOSED SITE. REFER TO PLAT AND INCLUDED PROPERTY SURVEY.
 5. BUILDING FOOTPRINT IS FOR PRESENTATION PURPOSES ONLY AND NOT TO BE USED FOR CONSTRUCTION LAYOUT PURPOSES.
 6. ALL TREE PROTECTION IF REQ'D SHALL BE INSTALLED BY THE CONTRACTOR PRIOR TO COMMENCEMENT OF DEMOLITION AND/OR NEW CONSTRUCTION AND REMAIN IN PLACE FOR THE DURATION OF THE PROJECT.
 7. OWNER/CONTRACTOR SHALL ACQUIRE A LAND CLEARING PERMIT FROM CITY.
 8. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY ENGINEERING DESIGN AND CONSTRUCTION STANDARDS.
 9. PERMIT REQ'D FOR ALL WORK WITHIN THE SAGINAW HWY ROW.
 10. OWNER/CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS, LICENSES, AND APPROVALS FROM MDOT AND CITY PRIOR TO ANY CONSTRUCTION.
 11. ALL EXISTING CONCRETE AND BITUMINOUS TO BE REMOVED SHALL BE SAWCUT. ALL CONCRETE AND BITUMINOUS REMOVALS SHALL BE TAKEN OFF-SITE TO A LOCATION TO BE DETERMINED BY THE CONTRACTOR.
 12. ALL EXISTING WALKS SHALL BE PROTECTED. DAMAGED CONCRETE SHALL BE REPLACED AT NO COST TO THE CITY.
 13. ASPHALT PAVEMENT SECTION AND SITE PREPARATIONS SHALL BE PER GEOTECHNICAL REPORT BY PSI, INC. DATED 2/1/2023.



NOTE: ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH MDOT AND CITY OF LANSING STANDARDS.

SAGINAW HWY PAVEMENT SECTION (MDOT):
TOPPING: 7" HMA SECTION MIX & LAYERS PER MDOT
BASE: 8" AGGREGATE
SUBBASE: 18" SAND
CURB: TYPE F4

BRS ENGINEERING, LLC
3821 Stoughton Drive
Lansing, MI 48910
Phone: (517) 719-5094
brengeering@comcast.net

BRSE

INGHAM COUNTY LAND BANK
3024 TURNER ROAD
LANSING, INGHAM COUNTY, MI

IFC

NO.	BY	DATE	REVISIONS
1	BRS	9/14/22	ISSUE FOR PRESENTATION
2	BRS	12/22/23	ISSUE FOR CITY REVIEW
3	BRS	2/1/23	REVISION FOR CITY REVIEW
4	BRS	3/2/23	REVISION FOR IFC

REVISED IN ACCORDANCE WITH CONSTRUCTION RECORDS

POINTE WEST CONDOMINIUMS
5-UNITS, 1 BUILDING
1209 W. SAGINAW
LANSING, INGHAM COUNTY, MI

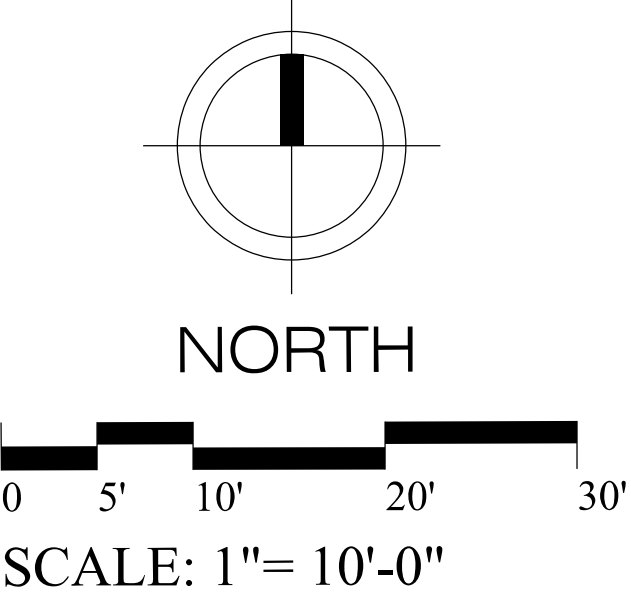
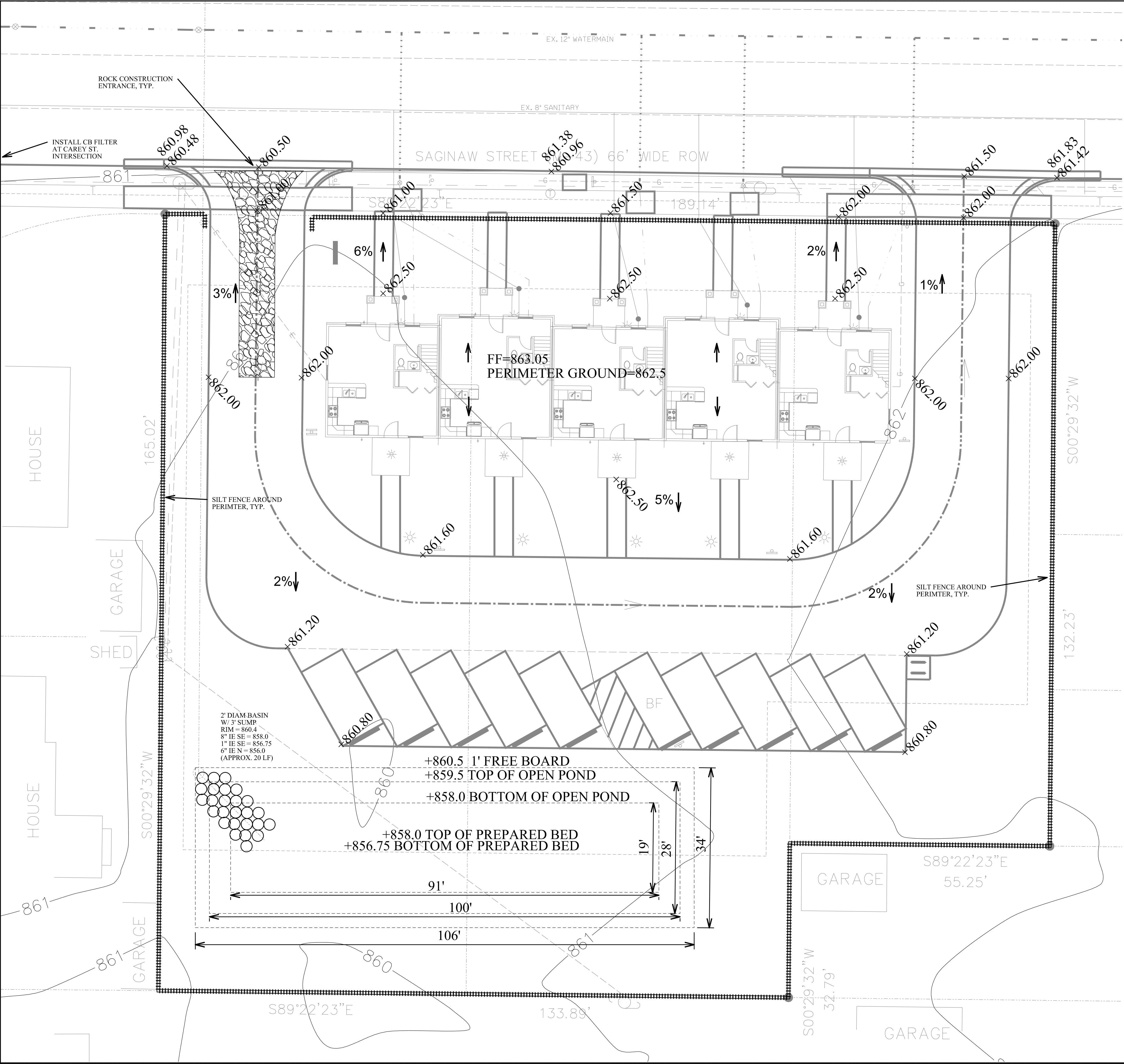
SITE LAYOUT PLAN

PROJECT NO.	DATE
BRS	9/8/22
DRAWN BY	DATE
BRS	9/8/22
ENGINEER	DATE
BRS	9/8/22
CAD FILE	EDIT
SCALE	1"=10'
DRAWING	
PLOT SCALE	

PROJECT: 0001

C2.0

SHEET NO.



GRADES ARE IN NAVD88 DATUM.

POND AND OUTLET SHALL BE MAINTAINED PER THE CITY'S REGULATION. ALL DRAINAGE ON SITE AND TURF AREAS SHALL BE MAINTAINED BY THE PROPERTY OWNER.

ALL SOIL EROSION CONTROL MEASURES SHOWN OR NOT SHOWN ON THESE PLAN SHEETS REQUIRED TO MAINTAIN THE SITE IN ACCORDANCE WITH THE CITY AND DEPARTMENT OF ENVIRONMENTAL QUALITY'S (DEQ) RULES AND REGULATIONS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR OF THE PROJECT REPRESENTED BY THESE PLAN SHEETS.

THE GENERAL CONTRACTOR, YET TO BE DETERMINED, AND/OR RESPONSIBLE PARTY SHALL BE NAMED ON THE SOIL EROSION CONTROL APPLICATION AT THAT TIME.

THE CONTRACTOR SHALL VERIFY ALL EXISTING AND PROPOSED GRADES PRIOR TO CONSTRUCTION AND NOTIFY THE ENGINEER AND/OR OWNER OF ANY DISCREPANCIES THAT MAY AFFECT THE PROPOSED WORK OR COST.

NOTES:

1. THERE ARE NO KNOWN CONTAMINATIONS OR HAZARDOUS MATERIALS ON SITE.
2. ALL STORM PIPE SHALL BE PER CITY AND MDOT STANDARDS AND SPECIFICATIONS.
3. SITE IS NOT WITHIN 500' OF STREAM, LAKE, OR OPEN CHANNEL COUNTY DRAIN.
4. STORM SEWER IN SAGINAW HWY IS LOCATED WITHIN A KNOWN CITY/COUNTY DRAINAGE DISTRICT.
5. BUILDING FOOTPRINT IS FOR PRESENTATION PURPOSES ONLY AND NOT TO BE USED FOR CONSTRUCTION LAYOUT PURPOSES. SEE ARCHITECTURAL PLANS.
6. ALL TREE PROTECTION SHALL BE INSTALLED BY THE CONTRACTOR PRIOR TO COMMENCEMENT OF DEMOLITION AND/OR NEW CONSTRUCTION AND REMAIN IN PLACE FOR THE DURATION OF THE PROJECT.
7. EXISTING SITE IS RESIDENTIAL WITH ABANDONED YARD.
8. MAXIMUM SLOPE 1:4 FOR GRADED AREAS UNLESS OTHERWISE INDICATED.
9. SOIL EROSION AND DEQ PERMIT SHALL BE APPLIED FOR BY CONTRACTOR.
10. HANDICAP AND SIDEWALK RAMPS AND ACCESS SHALL BE IN ACCORDANCE WITH MICHIGAN BARRIER FREE DESIGN GRAPHICS MANUAL, 1993. MAXIMUM SLOPE = 8.3% OR 1:12. CONTRACTOR SHALL BE RESPONSIBLE FOR PLACING ALL BARRIER FREE RAMPS INDICATED BY THIS NOTE. BARRIER FREE RAMPS SHALL BE CONCRETE PER DETAILS.
11. ALL DISTURBED AREAS SHALL RECEIVE PERMANENT EROSION CONTROL WITHIN 5 DAYS OF FINAL GRADING.
12. AS DESIGNED ON THESE PLAN SHEETS, THERE WILL NOT BE ANY ADVERSE AFFECT ON ADJACENT PROPERTIES DUE TO STORM WATER RUNOFF.
13. SOIL INFORMATION WILL BE AVAILABLE FROM OWNER. SOIL MAPPING INDICATES THE SITE IS: U1B - URBAN LAND - MARLETTE COMPLEX, 2-12% SLOPES
14. THIS SITE IS NOT WITHIN A 100 YEAR FLOOD PLAIN.
15. ALL PIPE TO STRUCTURE PENETRATIONS SHALL BE WRAPPED ON THE OUTSIDE WITH TWO LAYERS OF GEOTEXTILE FABRIC.
16. SEE DETAILS SHEET 6.1 FOR SILT FENCE AND FILTER FABRIC INLET FILTER DETAILS.
17. CONTRACTOR SHALL SWEEP STREETS IN OR CONTIGUOUS TO PROPERTY A MINIMUM OF ONCE PER WEEK OR MORE FREQUENTLY AS REQUIRED BY THE CITY, COUNTY, OR STATE.

2023												
CONSTRUCTION SEQUENCE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Tree Protection Installation				X	X							
SESC Installation (must be installed before bldg demo)				X	X							
Tree Removal				X	X							
Site Balance & Detention				X	X	X	X					
Storm Install				X	X	X						
Utilities Install				X	X	X	X	X	X	X	X	
Building Construction							X	X	X			
Site Improvements										X	X	X
Site Stabilization (Seed in Spring if Reg'd)										X	X	
Remove SESC TAB (Only after Site Stabilization)												
Occupancy Approval - TBD												



MICHIGAN DEPARTMENT OF MANAGEMENT AND BUDGET
S-E-S-C KEYING SYSTEM

KEY	BEST MANAGEMENT PRACTICES	SYMBOL	WHERE USED
EROSION CONTROLS			
E5	DUST CONTROL		For use on construction sites, unpaved roads, etc. to reduce dust and sedimentation from wind and construction activities.
E8	PERMANENT SEEDING		Stabilization method utilized on sites where earth change has been completed (final grading attained).
E12	RIPRAP		Use along shorelines, waterways, or where concentrated flows occur. Slows velocity, reduces sediment load, and reduces erosion.
SEDIMENT CONTROLS			
S51	SILT FENCE		Use adjacent to critical areas, to prevent sediment laden sheet flow from entering these areas.
S52	CATCH BASIN SEDIMENT GUARD		Use in or at stormwater inlets, especially at construction sites.
S53	STABILIZED CONSTRUCTION ACCESS		Used at every point where construction traffic enters or leaves a construction site.
S58	INLET PROTECTION FABRIC DROP		Used at stormwater inlets, especially at construction sites.

BRS ENGINEERING, LLC
3821 Stoughton Drive
Lansing, MI 48910
Phone: (517) 719-5094
brengeering@comcast.net

BRSE

INGHAM COUNTY LAND BANK
3024 TURNER ROAD
LANSING, INGHAM COUNTY, MI
PHONE: 517-267-5221 ext: 2384

IFC

POINTE WEST CONDOMINIUMS
5-UNITS, 1 BUILDING
1290 W. SAGINAW
LANSING, INGHAM COUNTY, MI

GRADING & SESC PLAN

PROJECT NO. 0001
C3.0
SHEET NO.

SITE DEVELOPMENT STORMWATER TOOL (SDST)

Name	Lansing Townhomes
Parcel Identification	33-01-01-17-204-250
Location Address	1209 W. Saginaw St. Lansing, MI 48915
Nearest Major Intersection	Carry & Saginaw Streets

Contact	Jerry Fedewa Homes, Inc.
Organization	5670 Okemos Road East Lansing, MI 517-339-0020
Phone	
Email	

Contact	Brett Stockhill
Organization	BRS Engineering, LLC
Address	3821 Stoneleigh Dr. Lansing, MI 48910
Phone	(517) 719-5594
Email	bstockhill@brseng.net
Date	November 1, 2022

PROJECT DESCRIPTION	5 Unit residential with parking area
---------------------	--------------------------------------

COMMENTS, QUESTIONS, OR CONCERNS

FOR CITY USE ONLY	Site Plan Review	SPR 20, _____
	Public Service Site Plan	SPW _____
	Reviewed by	
	Approved by	
	Date	
	Comments:	

PURPOSE
The purpose of this spreadsheet model is to assist the design professional with sizing stormwater control measures for a given site development project. The spreadsheet model generates flow conditions based on the NRCS Curve Number approach using curvilinear unit hydrographs and a Type II rainfall distribution. Flow is passed through the stormwater control measures using a simple reservoir routing technique. The intent of the spreadsheet model is to help simplify the calculation steps but is by no means a substitute for professional engineering judgement.

STEPS	
1 Job Control	Job control information is typically set once per community according to design requirements.
2 Site Area and Soil Type	Input site total area and the native soil type. A manual entry for the infiltration rate can be input. Backup information supporting the infiltration rate should be provided when manually adjusting the default values.
3 Condition Prior to Development	Use the drop down boxes to select the cover type for the site and enter the surface area for each cover type. Up to five (5) separate cover types may be selected. The composite CN for the site is automatically calculated. Manual entry of the CN is allowed. Time of concentration is also entered. Total site area must equal the area entered in Step 1.
4 Post Development Condition	Repeat Step 3 except for the post development conditions.
5 Stormwater Control Measures	Enter SCMs here. First enter the cross-sectional information, next enter the outlet control mechanism. Cross-section information is entered from the bottom up. Evaporation and infiltration may be toggled on and off for each control measure independently. It is suggested to work first on the smallest storm and meet the criterion. Then work sequentially on the larger events meeting the incremental criteria for each event.
6 Individual Results	This section shows the detailed results for each SCM.
7 Drainage Area Summary	Review drainage area summary. Check for uncontrolled portions of the site.
8 Sediment Control Strategy	Select the strategy that will be used to control sediment from portions of the site that do not pass through a SCM (see summary from Step 7).
9 Total System Results	This section shows the global results and whether design criteria have been met.
10 Graphical System Results	This section displays the results in the form of the hydrographs.

CELL FORMATTING	
STEP X	Step number headings
Labels	Labels
Input	Input Cells
Calculation	Calculated Cells
Linked	Linked Cells (similar to calculated cells)
Standardized variables	Input Cells, but these are standardized variables and normally should not be changed

NOMENCLATURE	
CN	Curve Number
Coefficient C	Curve coefficient (typical value is 0.6) or the Weir coefficient (typical value 3.0) depending on selected outlet type
CPD	Condition Prior to Development
Dev	Development
ET	Evapotranspiration
Infil	Infiltration
Len	Length
NA	Not Applicable
Outflow	Sum of Outlet flow and Overflow (Step 7)
Outlet	Discharge through the orifice or weir (Step 7)
Overflow	Discharge overflowing the SCM (Step 7)
PRF	Peak Rate Factor (a shape factor associated with the curvilinear unit hydrograph)
Qpeak	Peak Flow
S_Area	Surface Area
SCM	Stormwater Control Measure
SW	Stormwater
Vol	Volume

MODELING CAVEATS	
1	The design professional is responsible for proper placement of the stormwater control measure on the site to achieve the necessary overall site drainage control.
2	
3	

REFERENCES	
1	USDA NRCS NEH Part 630 Hydrology: Chp 3 Hydrologic Soil Groups, Chp 8 Land Uses and Treatment Classes, Chp 9 Hydrologic Soil-Cover Complexes, Chp 10 Estimation of Direct Runoff from Storm Rainfall, Chp 15 Time of Concentration, and Chp 16 Hydrographs
2	Spreadsheet model developed by Dan Christian, Tetra Tech. (517) 316-3639. Dan.Christian@tetra-tech.com

SITE CHARACTERISTICS

SITE AREA	0.53 acres
SOIL TYPE	HSG
Silt/beam	C
Infil (in/hr)	0.27
Total	2.42

CONDITION PRIOR TO DEVELOPMENT

No.	Cover	Area (ac)	CN
1	Urban (Open Space (lawns, parks, golf, cemeteries)) (Good (grass cover >75%))	0.43	64
2	Urban (Paved Parking, Roofs, Driveways (excl. ROW)) 100% impervious	0.1	98
3	Not Used	NA	NA
4	Not Used	NA	NA
5	Not Used	NA	NA
6	Manual Entry	0.53	
Total			

Time of Concentration					
No.	Surface Feature	Slope (ft/ft)	Manning n	Length (ft)	Ti (hr)
1	Sheet Flow - Dense grasses	0.01	0.24	85	0.32
2	Not Used	NA	NA	NA	0.00
3	Not Used	NA	NA	NA	0.00
4	Not Used	NA	NA	NA	0.00
5	Not Used	NA	NA	NA	0.00
6	Manual Entry				0.32
CPD Tc (hr)					0.32

POST DEVELOPMENT CONDITIONS

No.	Cover	Area (ac)	CN
1	Urban (Open Space (lawns, parks, golf, cemeteries)) (Good (grass cover >75%))	0.22	64
2	Urban (Paved Parking, Roofs, Driveways (excl. ROW)) 100% impervious	0.31	98
3	Not Used		N/A
4	Not Used		N/A
5	Not Used		N/A
6	Manual Entry	0.53	
	Total	0.53	

Time of Concentration					
No.	Surface Feature	Slope (ft/ft)	Manning n	Length (ft)	Ti (hr)
1	Sheet Flow - Dense grasses	0.01	0.24		0.16
2	Shallow Conc. - Pavement and small upland gullies	0.01	0.025	50	0.01
3	Not Used		N/A		0.00
4	Not Used		N/A		0.00
5	Not Used		N/A		0.00
6	Manual Entry				0.16
				Post Tc (hr)	0.16

JOB CONTROL

CLIMATOLOGY DATA

Water Quality	Channel	Collection	Roadway
Treatment Volume	Protection Pipe	System	Food System
Recurrence Interval	0.9	2-year	10-year
Duration (hr)	24-hr	24-hr	24-hr
Precipitation (in)	0.90	2.42	3.43
		5.20	

Evapotranspiration (in/day)	0.1
Heterograph Distribution	Type II

DESIGN CRITERIA

Recurrence Interval	90%	2-year	10-year	100-year
Yes	NA	NA	NA	NA
Peak flow for Sediment Load	NA	100%	100%	100%
Volume (% of CPD)	NA	100%	NA	NA
Dewater Time (hr), surface water (time from end of rainfall)	NA	48	48	48
Dewater Time (hr), complete drainage (time from end of rainfall)	NA	48	72	72

CONDITION PRIOR TO DEVELOPMENT

Ratio of initial Abstraction to Potential Maximum Retention $\lambda = (a/S)$	0.06			
Recurrence Interval	90%	2-year	10-year	100-year
Precipitation (in) [P]	0.90	2.42	3.43	5.20
Actual retention after runoff begins (in) [F]	0.72	1.53	1.91	2.40
Precipitation Excess (aka runoff) (in) [Q]	0.18	0.89	1.52	2.80
Precipitation Excess (aka runoff) (cf) [Q]	355	1,720	2,928	5,384
Precipitation Excess as a fraction of the total rainfall (%)	21%	37%	44%	54%

POST DEVELOPMENT CONDITIONS (No SCMs)

Ratio of Initial Abstraction to Potential Maximum Retention ($\lambda = i_a/S$)	0.05			
Recurrence Interval	90%	2-year	10-year	100-year
Precipitation (in) [P]	0.90	2.42	3.43	5.2
Actual retention after runoff begins (in) [F]	0.46	0.88	1.08	1.33
Precipitation Excess (aka runoff) (in) [Q]	0.44	1.54	2.35	3.87
Precipitation Excess (aka runoff) (cf) [Q]	855	2,959	4,521	7,437
Precipitation Excess as a fraction of the total rainfall (%)	49%	64%	69%	74%

Master Site Development Stormwater Tool

STORMWATER CONTROL MEASURES

SCM 1

Practice Type: **Bioretention**

Drainage Area (ac): **0.53**

Discharge To: **Offsite**

Sediment Strategy: **3 Sedimentation basin or forebay**

X-section Entry: **User Input Surface Area and Volume (e.g. data from CAD)**

Cross Section	Media	Layer	Side	Width	Len	Surface	Total	User Input	Porosity	Field	SW	UserDef	Water
Top		(in)	Slope	(ft)	(ft)	Area (sf)	Vol (cf)	SA (sf)	Vol (cf)	Capacity	Void	Sto	Vol
Enter data from bottom up	Surface Storage	18					1,730	3,398	NA	NA	100%	0	3,398
Bottom	NA						0	NA	NA	100%	0	0	0
	Mulch	0.25					1,200	25	NA	NA	40%	10	10
	Sand	12					1,200	1,200	40%	8%	31%	372	372
Total							4622.5						1,780

Surface Storage Depth (in)	18	Allowed Area (sf)	
Media Storage Depth (in)	12.25	Evaporation	Yes 2320
Media (limiting) Infiltration Rate (in/hr)	6	Infiltration (through bottom)	Yes 1200

Outlet Type	Orifice	Orifice	Orifice	None	None
Offset from bottom (in)	12.25				
coefficient c	0.011				
Area (sf) or Length (ft)	0.1088				
Volume below the offset (cf)	382	3E+14	3E+14	NA	NA

Orifice Pipe	6"	6"	6"	4"	2"	1"
Max. surface to outlet center	3	4	1.5	3	3	3
Area of ORIFICE	0.3421	0.1908	0.1908	0.0862	0.0201	0.0046
Coef. HDPE/PCV	0.011	0.011	0.011	0.011	0.011	0.011
Max Outflow (CF/S)	2.36	1.9	1.16	0.74	0.17	0.04
Infil. 1	558.25	0.25	1200	300		
Infil. 2	867.25	1	1200	1200		
Free Pipe Flow (CF/S)	1.71	0.39	0.79	0.27		
	2%	2%	2%	2%		

SCM 2

Practice Type: **None**

Drainage Area (ac):

Discharge To:

Sediment Strategy: **1 Sedimentation basin or forebay**

X-section Entry:

Cross Section	Media	Layer	Side	Width	Len	Surface	Total	User Input	Porosity	Field	SW	UserDef	Water
Top		(in)	Slope	(ft)	(ft)	Area (sf)	Vol (cf)	SA (sf)	Vol (cf)	Capacity	Void	Sto	Vol
Enter data from bottom up													
Bottom													
Total													

Surface Storage Depth (in)		Allowed Area (sf)	
Media Storage Depth (in)		Evaporation	
Media (limiting) Infiltration Rate (in/hr)		Infiltration (through bottom)	

Outlet Type	None	None	None	None	None
Offset from bottom (in)					
coefficient c					
Area (sf) or Length (ft)					
Volume below the offset (cf)					

SCM 3

Practice Type: **None**

Drainage Area (ac):

Discharge To:

Sediment Strategy: **1 Sedimentation basin or forebay**

X-section Entry:

Cross Section	Media	Layer	Side	Width	Len	Surface	Total	User Input	Porosity	Field	SW	UserDef	Water
Top		(in)	Slope	(ft)	(ft)	Area (sf)	Vol (cf)	SA (sf)	Vol (cf)	Capacity	Void	Sto	Vol
Enter data from bottom up													
Bottom													
Total													

Surface Storage Depth (in)		Allowed Area (sf)	
Media Storage Depth (in)		Evaporation	
Media (limiting) Infiltration Rate (in/hr)		Infiltration (through bottom)	

Outlet Type	None	None	None	None	None
Offset from bottom (in)					
coefficient c					
Area (sf) or Length (ft)					
Volume below the offset (cf)					

SCM 4

Practice Type: **None**

Drainage Area (ac):

Discharge To:

Sediment Strategy: **1 Sedimentation basin or forebay**

X-section Entry:

Cross Section	Media	Layer	Side	Width	Len	Surface	Total	User Input	Porosity	Field	SW	UserDef	Water
Top		(in)	Slope	(ft)	(ft)	Area (sf)	Vol (cf)	SA (sf)	Vol (cf)	Capacity	Void	Sto	Vol
Enter data from bottom up													
Bottom													
Total													

Surface Storage Depth (in)		Allowed Area (sf)	
Media Storage Depth (in)		Evaporation	
Media (limiting) Infiltration Rate (in/hr)		Infiltration (through bottom)	

Outlet Type	None	None	None	None	None
Offset from bottom (in)					
coefficient c					
Area (sf) or Length (ft)					
Volume below the offset (cf)					

STEP 5

Drainage Area considered middle of building south including partial back yards of neighboring property. Reduced impervious by 1506ft per lot.

Drainage Area (ac): **0.53**

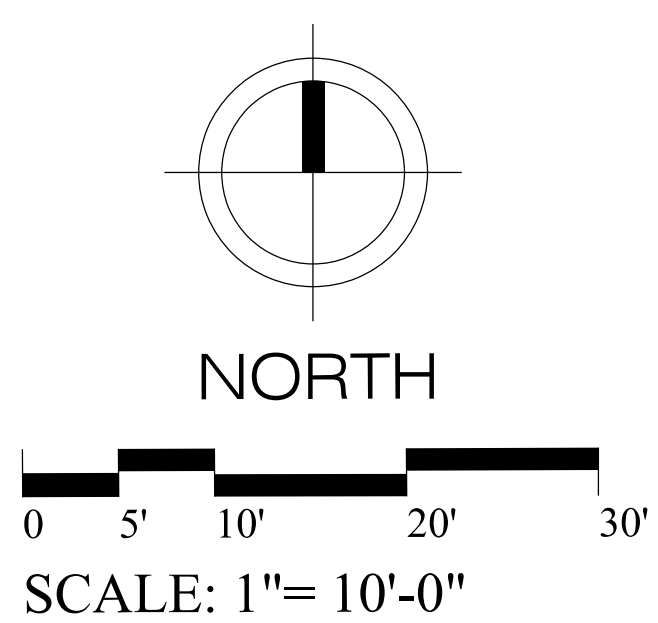
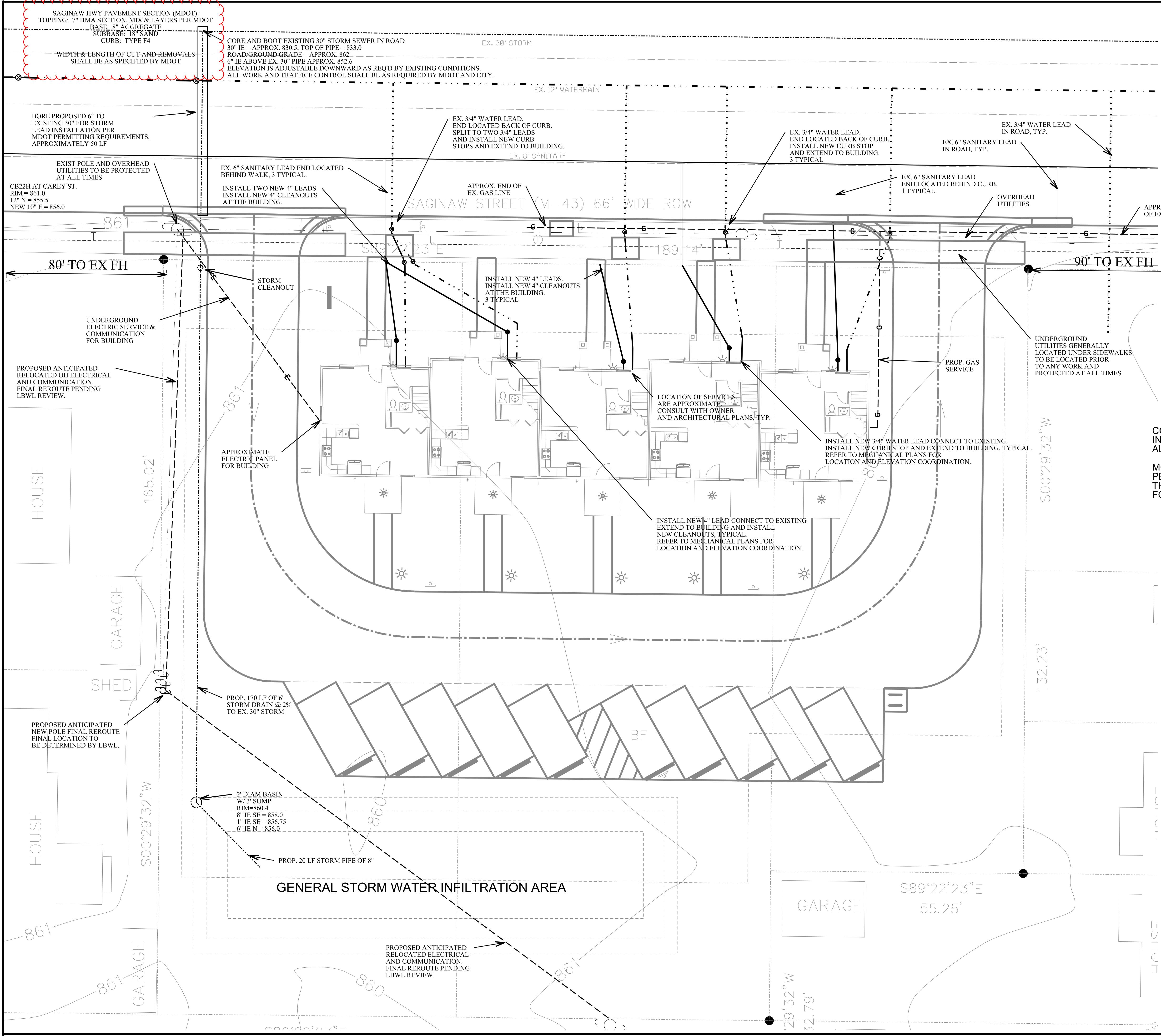
Discharge To: **Offsite**

Sediment Strategy: **3 Sedimentation basin or forebay**

X-section Entry: **User Input Surface Area and Volume (e.g. data from CAD)**

Cross Section	Media	Layer	Side	Width	Len	Surface	Total	User Input	Porosity	Field	SW	UserDef	Water
Top		(in)	Slope	(ft)	(ft)	Area (sf)	Vol (cf)	SA (sf)	Vol (cf)	Capacity	Void	Sto	Vol
Enter data from bottom up	Surface Storage	18					1,730	3,398	NA	NA	100%	0	3,398
Bottom	NA						0	NA	NA	100%	0	0	0
	Mulch	0.25					1,200	25	NA	NA	40%	10	10
	Sand	12					1,200	1,200	40%	8%	31%	372	372
Total							4622.5						1,780

Surface Storage Depth (in)	18	Allowed Area (sf)	
Media Storage Depth (in)	12.25	Evaporation	Yes 2320
Media (limiting) Infiltration Rate (in/hr)	6	Infiltration (through bottom)	Yes 1200</



- NOTES:
1. SANITARY LEAD FOR BUILDING SHALL BE 4" SCH 40 AT MIN. GRADE OF 1%. SANITARY MAINS SHALL BE 8" AT GRADES SHOWN ON PLAN SHEETS. MINIMUM SLOPE FOR 8" SANITARY SHALL BE 0.4%.
 2. WATER LEAD FOR EACH UNIT SHALL BE 3/4" TYPE K COPPER PER LBWL STANDARDS WITH CURB STOP.
 3. WATER MAIN SHALL DUCTILE IRON - CL54 WITH MIN. OF 5' COVER.
 4. SEPARATION BETWEEN WATER AND SANITARY MAINS SHALL BE 18" MIN. VERTICAL, 10' MIN. HORIZONTAL.
 5. WATERMAIN TAP AND FIRE HYDRANT ASSEMBLY SHALL BE PER MERIDIAN TWP STANDARDS.
 6. ALL STORM CATCH BASINS SHALL HAVE A 3' SUMP PER CITY SPECIFICATIONS.
 7. THERE ARE NO KNOWN CONTAMINATIONS OR HAZARDOUS MATERIALS ON SITE.
 8. ALL STORM PIPE SHALL BE PER CITY AND MDT STANDARDS AND SPECIFICATIONS.
 9. STORM SEWER IN SAGINAW HWY IS LOCATED WITHIN A KNOWN COUNTY DRAINAGE DISTRICT.
 10. BUILDING FOOTPRINT IS FOR PRESENTATION PURPOSES ONLY AND NOT TO BE USED FOR CONSTRUCTION LAYOUT PURPOSES.
 11. ALL TREE PROTECTION SHALL BE INSTALLED BY THE CONTRACTOR PRIOR TO COMMENCEMENT OF DEMOLITION AND/OR NEW CONSTRUCTION AND REMAIN IN PLACE FOR THE DURATION OF THE PROJECT.
 12. ALL WATER AND SANITARY MAINS AND LEADS SHALL BE CONSTRUCTED ACCORDING TO LBWL & CITY STANDARDS.

CONTRACTOR SHALL MONUMENT AND RECORD ALL UTILITY LOCATIONS INCLUDING BENDS, VALVES, TAPS, CLEANOUTS, AND BUILDING ENTRY OF ALL WATER, SANITARY, GAS, ELECTRIC, ETC.

MONUMENTATION MUST INCLUDE AT LEAST TWO DIMENSIONS FROM A PERMANENT SITE FIXTURE SUCH AS A BUILDING CORNER OR MANHOLE. THESE MEASUREMENTS SHALL BE PROVIDED TO THE ENGINEER FOR RECORDING PURPOSES.

BRS ENGINEERING, LLC
3821 Stoughton Drive
Lansing, MI 48910
Phone: (517) 719-5094
brsengineering@comcast.net

BRSE

INGHAM COUNTY LAND BANK
3024 TURNER ROAD
LANSING, INGHAM COUNTY, MI

IFC

NO.	BY	DATE	REVISIONS
1	BRS	9/14/22	ISSUE FOR PRESENTATION
2	BRS	12/22/22	ISSUE FOR CITY REVIEW
3	BRS	2/7/23	REVISION FOR CITY REVIEW
4	BRS	3/27/23	REVISION FOR IFC

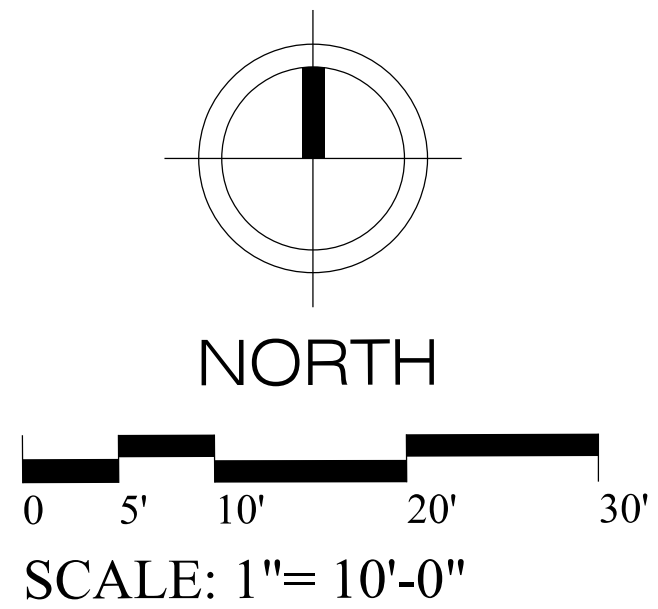
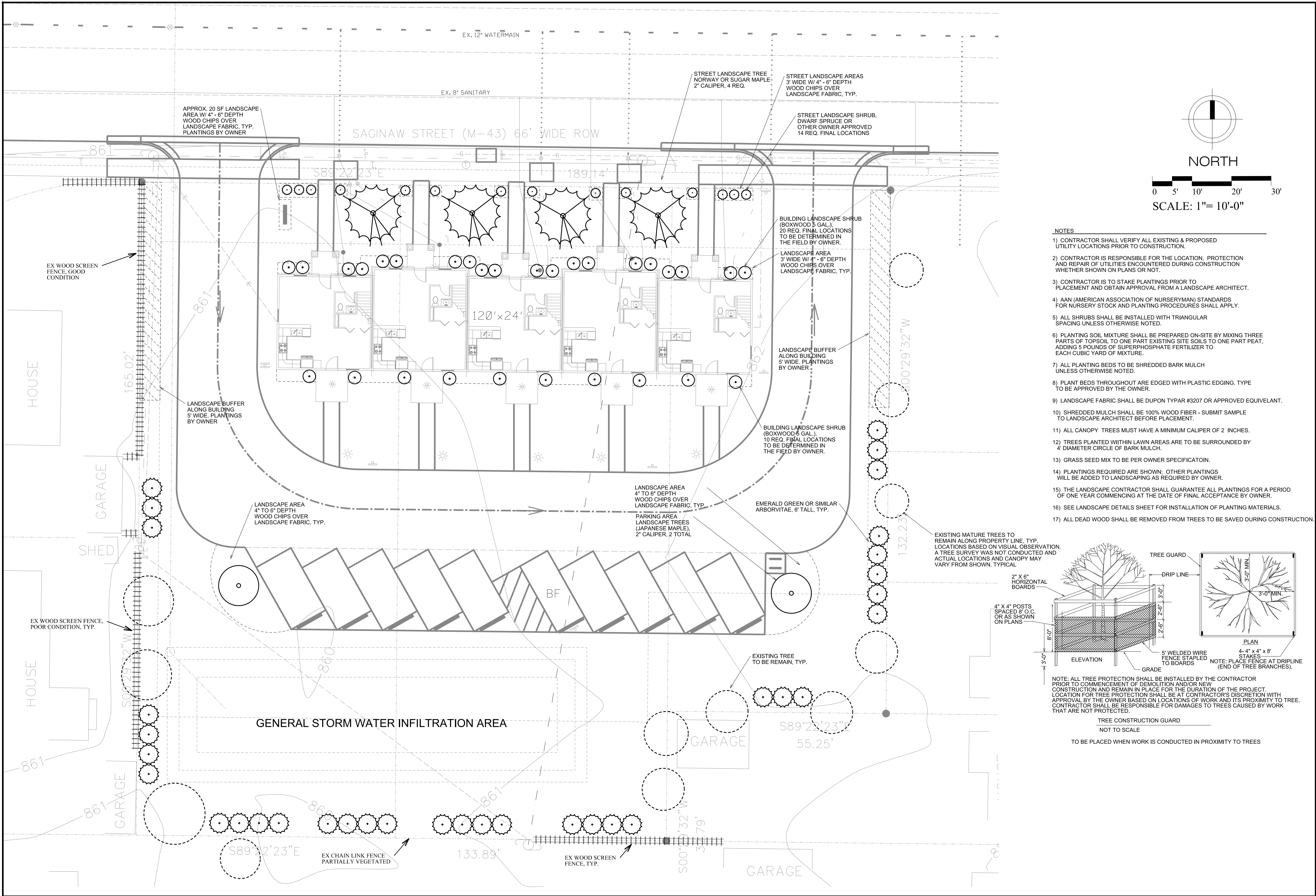
PROJECT: WEST CONDOMINIUMS
5-UNITS, 1 BUILDING
1290 W. SAGINAW
LANSING, INGHAM COUNTY, MI

UTILITY PLAN

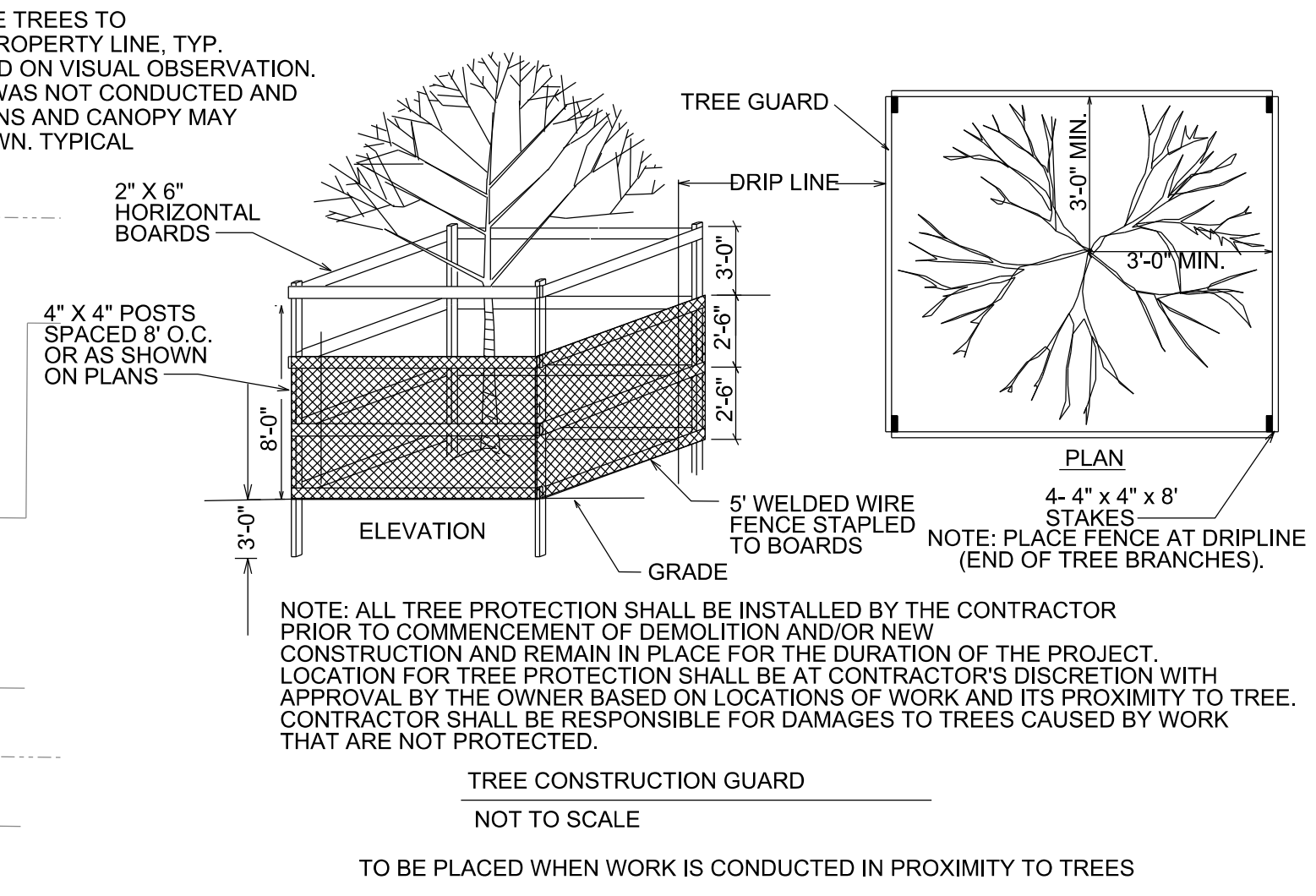
PROJECT NO.	WOK.	DATE
C4.0	BRS	9/8/22
	BR	9/8/22
	ENR	9/8/22
	ED	9/8/22

SCALE: 1"=10'
DRAWING
PLOT SCALE

PROJECT: C401
SHEET NO.



- NOTES**
- 1) CONTRACTOR SHALL VERIFY ALL EXISTING & PROPOSED UTILITY LOCATIONS PRIOR TO CONSTRUCTION.
 - 2) CONTRACTOR IS RESPONSIBLE FOR THE LOCATION, PROTECTION AND REPAIR OF UTILITIES ENCOUNTERED DURING CONSTRUCTION WHETHER SHOWN ON PLANS OR NOT.
 - 3) CONTRACTOR IS TO STAKE PLANTINGS PRIOR TO PLACEMENT AND OBTAIN APPROVAL FROM A LANDSCAPE ARCHITECT.
 - 4) AAN (AMERICAN ASSOCIATION OF NURSERYMAN) STANDARDS FOR NURSERY STOCK AND PLANTING PROCEDURES SHALL APPLY.
 - 5) ALL SHRUBS SHALL BE INSTALLED WITH TRIANGULAR SPACING UNLESS OTHERWISE NOTED.
 - 6) PLANTING SOIL MIXTURE SHALL BE PREPARED ON-SITE BY MIXING THREE PARTS OF TOPSOIL TO ONE PART EXISTING SITE SOILS TO ONE PART PEAT, ADDING 5 POUNDS OF SUPERPHOSPHATE FERTILIZER TO EACH CUBIC YARD OF MIXTURE.
 - 7) ALL PLANTING BEDS TO BE SHREDDED BARK MULCH UNLESS OTHERWISE NOTED.
 - 8) PLANT BEDS THROUGHOUT ARE EDGED WITH PLASTIC EDGING, TYPE TO BE APPROVED BY THE OWNER.
 - 9) LANDSCAPE FABRIC SHALL BE DUPON TYPAR #3207 OR APPROVED EQUIVELANT.
 - 10) SHREDDED MULCH SHALL BE 100% WOOD FIBER - SUBMIT SAMPLE TO LANDSCAPE ARCHITECT BEFORE PLACEMENT.
 - 11) ALL CANOPY TREES MUST HAVE A MINIMUM CALIPER OF 2" INCHES.
 - 12) TREES PLANTED WITHIN LAWN AREAS ARE TO BE SURROUNDED BY 4' DIAMETER CIRCLE OF BARK MULCH.
 - 13) GRASS SEED MIX TO BE PER OWNER SPECIFICATOIN.
 - 14) PLANTINGS REQUIRED ARE SHOWN; OTHER PLANTINGS WILL BE ADDED TO LANDSCAPING AS REQUIRED BY OWNER.
 - 15) THE LANDSCAPE CONTRACTOR SHALL GUARANTEE ALL PLANTINGS FOR A PERIOD OF ONE YEAR COMMENCING AT THE DATE OF FINAL ACCEPTANCE BY OWNER.
 - 16) SEE LANDSCAPE DETAILS SHEET FOR INSTALLATION OF PLANTING MATERIALS.
 - 17) ALL DEAD WOOD SHALL BE REMOVED FROM TREES TO BE SAVED DURING CONSTRUCTION.



BRS ENGINEERING, LLC
3821 Stoughton Drive
Lansing, MI 48910
Phone: (517) 719-5094
brsengineering@comcast.net

BRSE

INGHAM COUNTY LAND BANK
3024 TURNER ROAD
LANSING, INGHAM COUNTY, MI

IFC

NO.	BY	DATE	REVISIONS
1	BRS	9/14/22	ISSUE FOR PRESENTATION
2	BRS	12/2/22	ISSUE FOR CITY REVIEW
3	BRS	3/1/23	REVISION FOR CITY REVIEW
4	BRS	3/1/23	REVISION FOR IFC

REVISED IN ACCORDANCE WITH CONSTRUCTION RECORDS

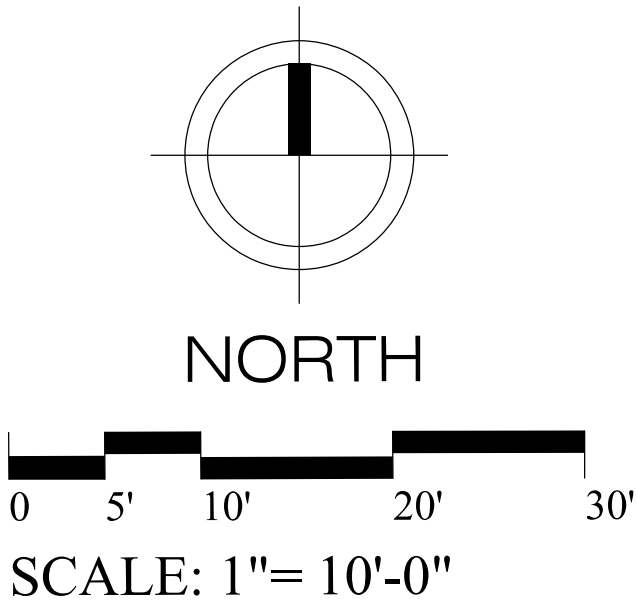
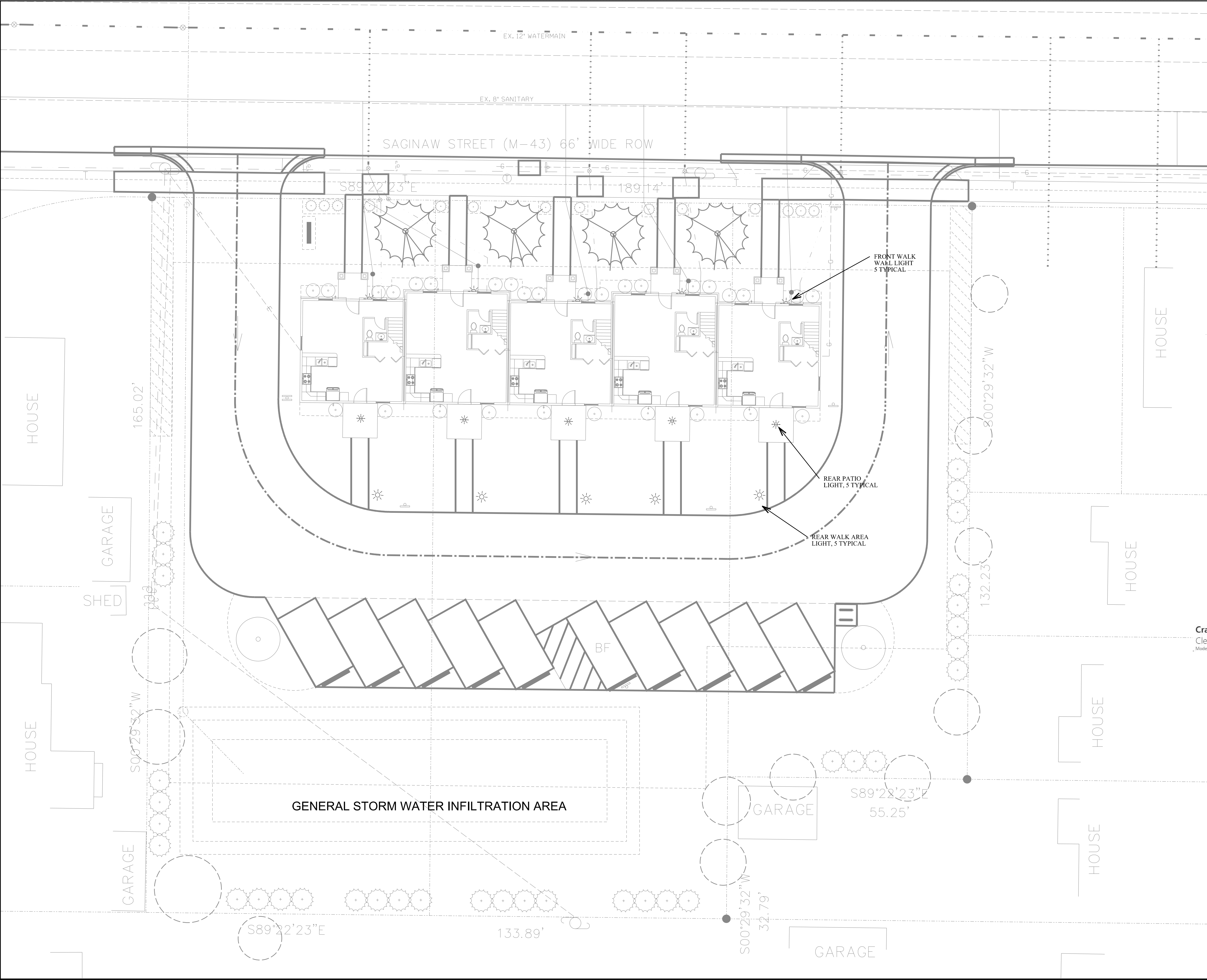
POINTE WEST CONDOMINIUMS
5-UNITS, 1 BUILDING
1290 W. SAGINAW
LANSING, INGHAM COUNTY, MI

LANDSCAPE PLAN

PROJECT	WORK	DATE
BRS	9/8/22	
BRS	9/8/22	
ENGINEER	DATE	
BRS	9/8/22	
CAD FILE	EDIT	

SCALE: 1"=10'
DRAWING
PLOT SCALE

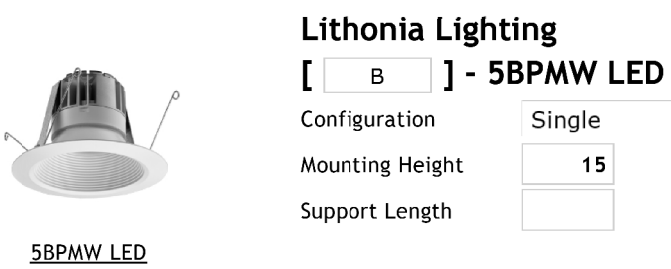
PROJECT: 0001
C5.0
SHEET NO.



FRONT WALK LIGHTING
WSR LED
Architectural Wall Sconce



REAR PATIO LIGHTING



REAR WALK LIGHTING



Craftmade Riviera III 3 Light 18" High Outdoor Post Light with Clear Beveled Glass Shade
Model: Z9725-080



BRS ENGINEERING, LLC
3821 Stokely Drive
Lansing, MI 48910
Phone: (517) 719-5094
bseengineering@comcast.net

BRSE

INGHAM COUNTY LAND BANK
3024 TURNER ROAD
LANSING, INGHAM COUNTY, MI

IFC

NO.	REVISIONS	BY	DATE
1	ISSUE FOR PRESENTATION	BRS	9/14/22
2	ISSUE FOR CITY REVIEW	BRS	12/2/22
3	REVISION FOR CITY REVIEW	BRS	2/14/23
4	REVISION FOR EC	BRS	3/27/23

REVISED IN ACCORDANCE WITH CONSTRUCTION RECORDS

PROJECT MOR: DATE: 9/8/22

DRAWN BY BRS DATE: 9/8/22

ENGINEER BRS DATE: 9/8/22

CAD FILE EDIT

SCALE 1"=10'

DRAWING

PLOT SCALE

PROJECT 0001

C5.1

SHEET NO.

POINTE WEST CONDOMINIUMS
5-UNITS, 1 BUILDING
1290 W. SAGINAW
LANSING, INGHAM COUNTY, MI

LIGHTING PLAN

SPECIFICATIONS

GENERAL SPECIFICATIONS

1. FOR PROTECTION OF UNDERGROUND UTILITIES, THE CONTRACTOR SHALL DIAL 1-800-482-7171 A MINIMUM OF 72 HOURS PRIOR TO EXCAVATING IN THE VICINITY OF UTILITY LINES. ALL "MISS DIG" PARTICIPATING MEMBERS WILL THUS BE ROUTINELY NOTIFIED. THIS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF NOTIFYING UTILITY OWNERS WHO MAY NOT BE A PART OF THE "MISS DIG" ALERT SYSTEM.
2. INFORMATION ON DEPTH, SIZE AND ETC. OF ALL OTHER UNDERGROUND UTILITIES SHOWN HEREON IS PLAN INFORMATION ONLY, OBTAINED FROM THE UTILITY COMPANY INVOLVED OR FROM OBSERVATION. PRIOR TO ANY CONSTRUCTION, IT IS RECOMMENDED THAT ALL UTILITY COMPANIES, AGENCIES, DEPARTMENTS AND ETC. INVOLVED BE CONTACTED FOR VERIFICATION OF SUCH LOCATIONS.
3. THE LOCATION, SIZE AND ELEVATION OF SEWERS, WATER LINES AND RELATED STRUCTURES SHOWN HEREON WERE OBTAINED FROM EXISTING PLANS PREPARED BY OTHERS AND FIELD OBSERVATIONS. BRSEENGINEERING, LLC. IS NOT RESPONSIBLE FOR ANY OTHER SEWERS, DRAINS, OR RELATED STRUCTURES NOT FOUND AND NOT SHOWN HEREON THAT MAY CROSS, PARALLEL, LIE CONTIGUOUS TO OR SERVICE THIS SITE.
4. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY, PRIOR TO BEGINNING CONSTRUCTION, ALL CRITICAL ELEVATIONS AND LOCATIONS OF UNDERGROUND UTILITIES. IF ELEVATIONS OR LOCATIONS ARE SUBSTANTIALLY DIFFERENT THAN SHOWN ON THE PLANS, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY.
5. ALL MATERIAL PLACED BELOW OR WITHIN THE INFLUENCE OF ROADS, CURBING, CONCRETE, PAVING OR ANY STRUCTURE SHALL BE COMPACTED TO 95% OF THE MATERIAL'S MAXIMUM UNIT WEIGHT BASED ON THE MODIFIED PROCTOR (ASTM D1557-70). IN AREAS OTHER THAN NOTED ABOVE, ALL MATERIAL SHALL BE COMPACTED TO 90% OF IT'S MAXIMUM UNIT WEIGHT.
6. ALL UTILITY BEDDING SHALL BE A MINIMUM OF CLASS "B" AS PER ASTM C-12, UNLESS OTHERWISE SPECIFIED ON THE PLANS. BEDDING SHALL BE CONSIDERED INCIDENTAL TO THE PLACING OF THE UTILITY. THE TYPICAL TRENCH DETAILS SHOWN ON THE MERIDIAN TOWNSHIP DETAILS SHALL BE USED FOR SANITARY SEWER AND WATER MAIN. THE TYPICAL TRENCH DETAIL ON THIS SHEET SHALL BE USED FOR ALL OTHER UTILITIES.
7. ALL FACILITIES AND GROUNDS DAMAGED BY CONSTRUCTION SHALL BE REPAIRED AND RETURNED AS NEARLY AS POSSIBLE TO THEIR CONDITION PRIOR TO THIS CONSTRUCTION. THIS SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
8. UPON COMPLETION OF GRADING, ALL DISTURBED AREAS SHALL BE COVERED WITH A MINIMUM OF 4" OF TOPSOIL AND THEN SEEDED AND MULCHED.
9. UPON COMPLETION OF CONSTRUCTION, THE CONTRACTOR SHALL REMOVE ALL MUD AND DEBRIS FROM SEWERS, MANHOLES, CATCH BASINS AND RELATED STRUCTURES.
10. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO SCHEDULE CONSTRUCTION IN SUCH A MANNER AS TO MINIMIZE INCONVENIENCE TO RESIDENTS DUE TO INTERRUPTIONS IN SEWER OR WATER SERVICE OR BLOCKAGE OF STREETS.

SANITARY SEWER LEADS

1. ALL SANITARY SEWER LEADS SHALL BE 6" AND LAID TO A MINIMUM SLOPE OF 1.00%.

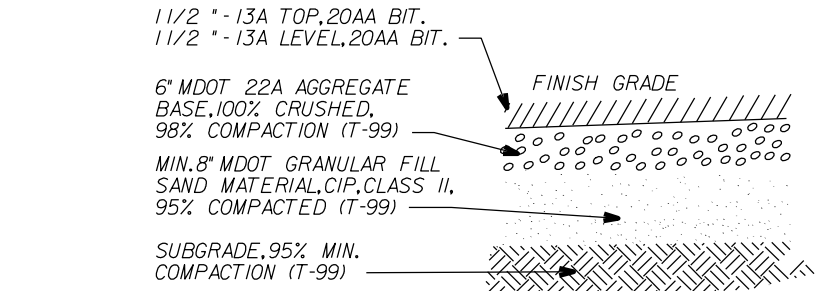
WATER SERVICE

1. ALL WATER LEADS SHALL BE 1.25" TYPE K COPPER.

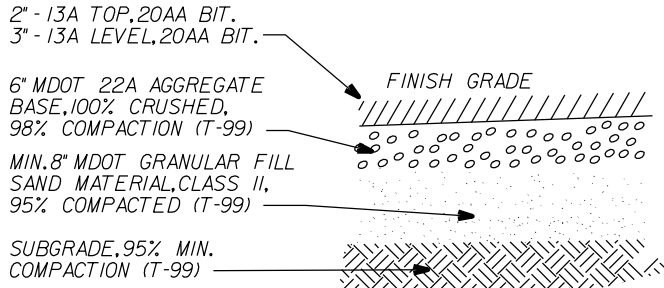
STORM SEWER

1. ALL STORM SEWER CONSTRUCTION SHALL COMPLY WITH THE CONSTRUCTION STANDARDS OF THE CITY AND SHALL BE SUBJECT TO THEIR INSPECTION AND APPROVAL.
 2. ALL DRAINAGE STRUCTURES SHALL BE THE MATERIAL AS SPECIFIED IN PLAN DETAILS. THE BASE OF ALL STRUCTURES SHALL BE PLACED ON A BED OF 4" OF COMPACTED SAND.
 3. STORM SEWER PIPE SHALL BE GALVANIZED CMP AS SPECIFIED ON PLANS. ALL JOINTS SHALL BE WRAPPED IN GEOTEXTILE MATERIAL.
- ROADS, PARKING AND CONCRETE
1. ALL WORK WITHIN THE ROAD RIGHT-OF-WAY SHALL COMPLY WITH THE CONSTRUCTION STANDARDS AND SPECIFICATIONS OF MDOT (INCLUDING BUT NOT LIMITED TO MATERIALS AND THICKNESSES). NO WORK SHALL BE PERFORMED WITHIN THE ROAD RIGHT-OF-WAY UNTIL THE APPROPRIATE PERMITS ARE OBTAINED. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO OBTAIN ALL PERMITS REQUIRED.
 2. ALL EXISTING THICKNESSES OF MATERIALS WITHIN PUBLIC ROADWAYS SHALL BE MATCHED DURING THE RECONSTRUCTION WITHIN THE ROAD RIGHT OF WAY.
 3. ANY UNDESIRABLE MATERIAL ENCOUNTERED BENEATH THE ROAD, DRIVEWAY, PARKING LOT OR BUILDING SHALL BE REMOVED AND REPLACED WITH SATISFACTORY MATERIAL PLACED IN 6" LAYERS AND COMPACTED TO 95% OF ITS MAXIMUM UNIT WEIGHT.

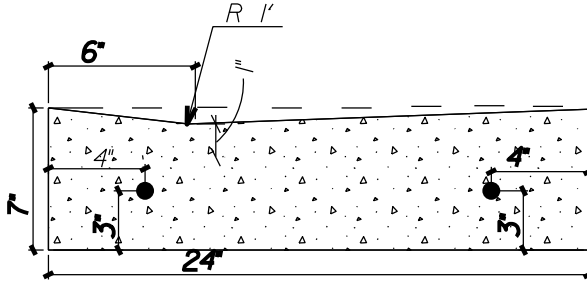
4. CURB AND GUTTER SHALL BE AS SHOWN ON THE PLANS. CURB AND GUTTER SHALL CONTAIN TWO 1/2" STEEL REINFORCING BARS PLACED AS SHOWN. CONCRETE SHALL BE GRADE 35S OR 35P WITH A 28 DAY STRENGTH OF 3500 P.S.I. IN ACCORDANCE WITH M.D.O.T. SPECIFICATIONS SEC. 6.09.
5. CURB AND GUTTER IN ROAD RIGHT OF WAY SHALL HAVE 11" OF COMPACTED CLASS 2 SAND PLACED BELOW IT. CURB AND GUTTER IN PARKING AREA SHALL HAVE A MINIMUM OF 4" OF COMPACTED CLASS 2 SAND PLACED BELOW IT.
6. ALL INTERSECTIONS OF SIDEWALKS, DRIVES AND PARKING AREAS AT THE SHOWN BARRIER FREE RAMP LOCATIONS SHALL COMPLY WITH BARRIER FREE REQUIREMENTS.
7. THE PARKING AND DRIVE AREAS SHALL HAVE THE FOLLOWING: GRADING AND COMPACTION OF THE SUBGRADE, A MINIMUM OF 8" OF COMPACTED CLASS 2 SAND SUB-BASE, A MINIMUM OF 6" OF 22A ROAD GRAVEL BASE AND 3" OF BITUMINOUS PAVING PLACED IN 2 - 1 1/2" LIFTS.



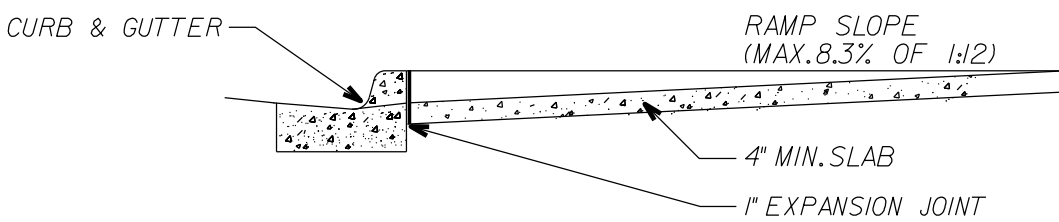
PARKING LOT BITUMINOUS PAVEMENT SECTION



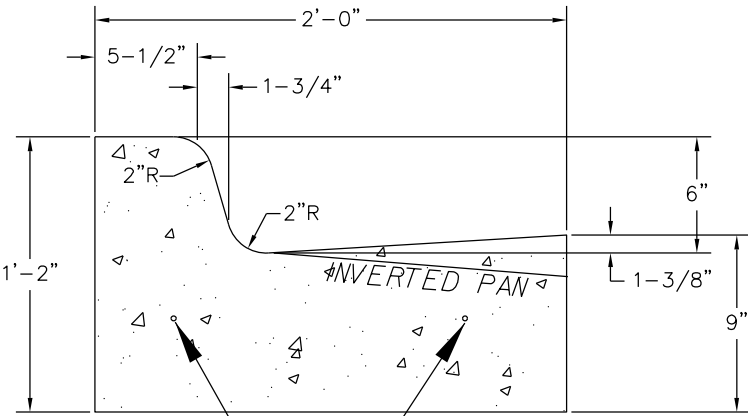
MINIMUM ROW BITUMINOUS PAVEMENT SECTION



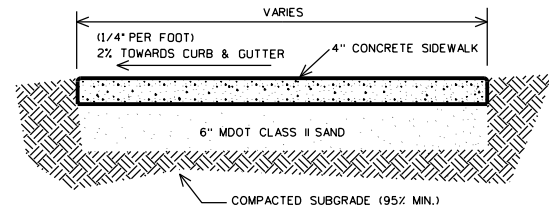
GUTTER PAN DETAIL



RAMP DETAIL



MDOT F-4
Concrete Curb & Gutter Detail



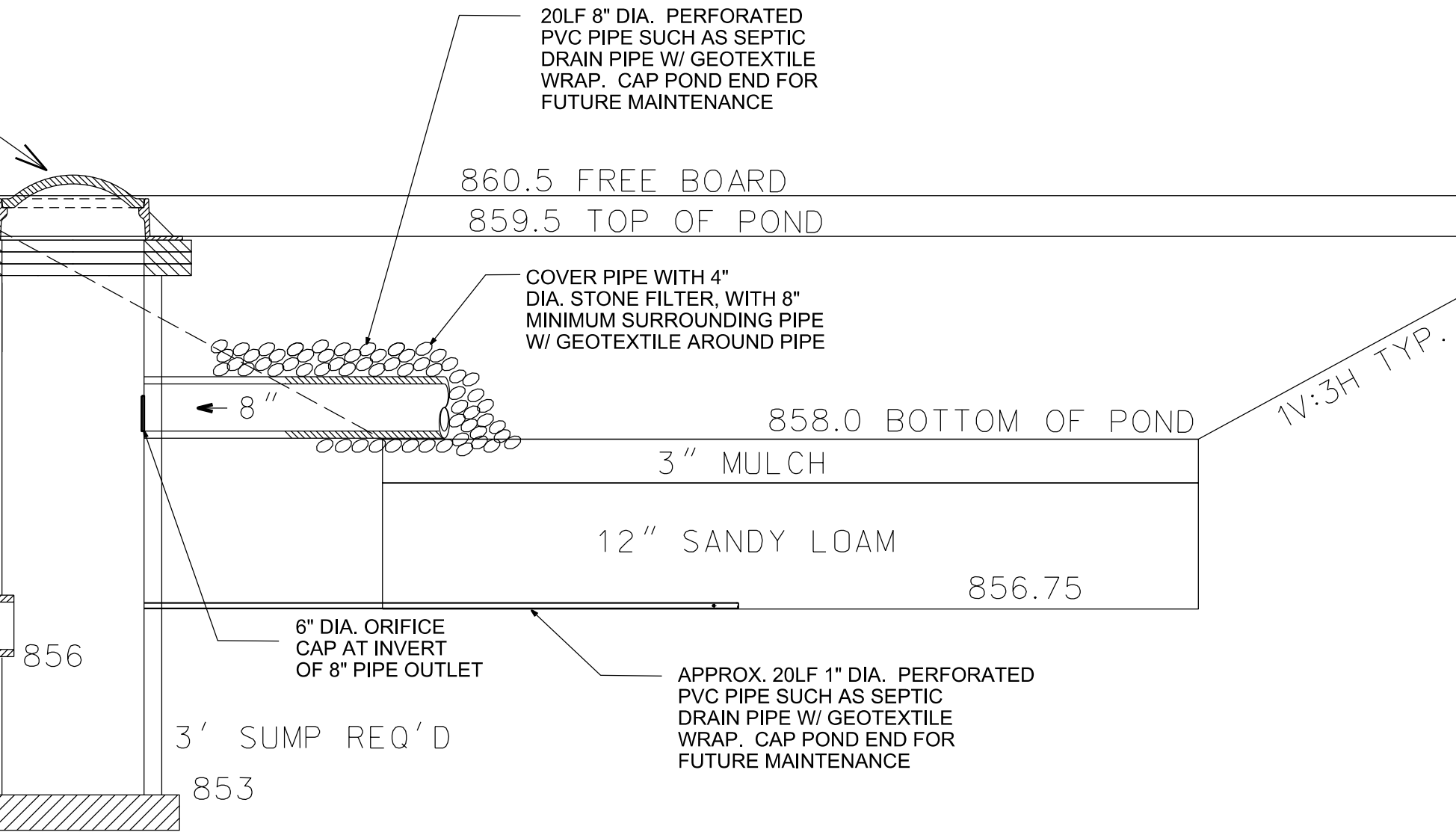
STANDARD SIDEWALK

NOT TO SCALE

EJIW 1020-01 FRAME AND BEEHIVE COVER SET IN FULL BED OF MORTAR. RIM ELEV FOR POND OVERFLOW = 860.9

2' DIAM. DROP INLET SET IN CEMENT

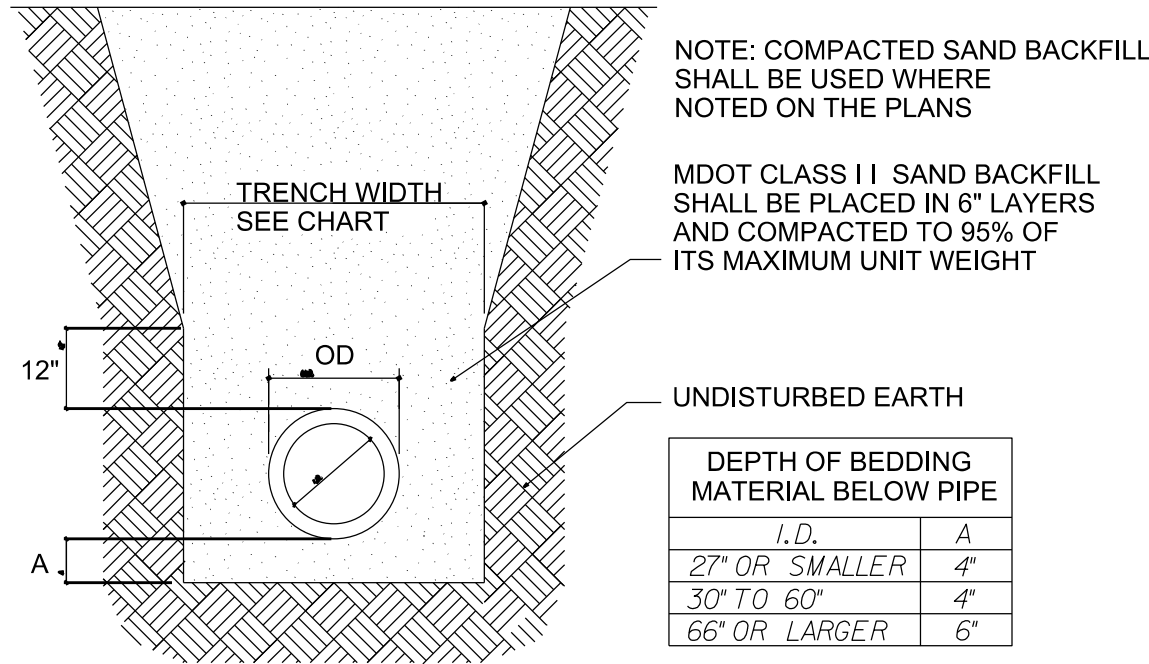
6" IE CAN BE ADJUSTED DOWN IF ALLOWED BY FIELD CONDITIONS



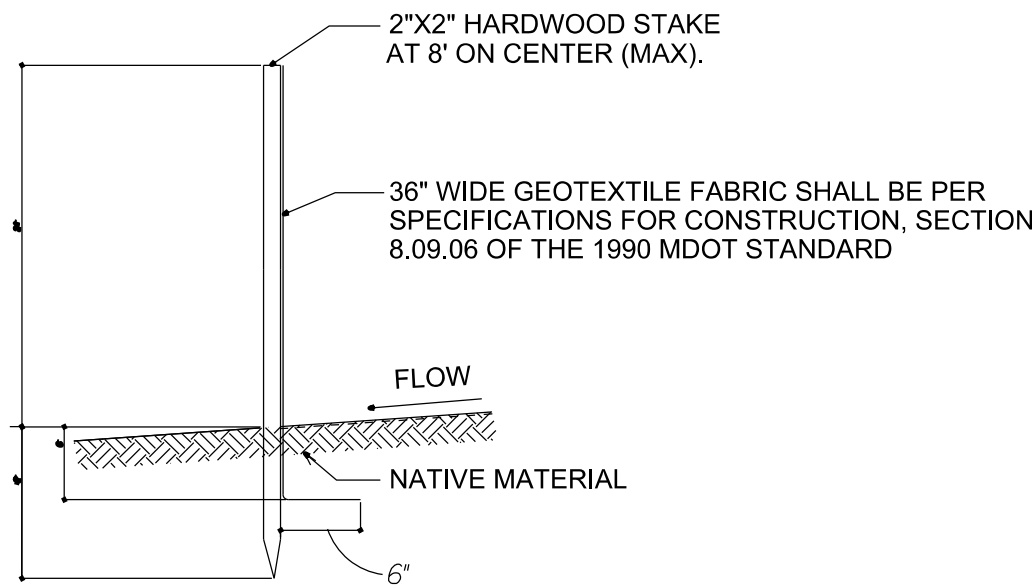
BIORETENTION/DETENTION POND SECTION

PIPE MATERIAL	TRENCH MINIMUM	WIDTH MAXIMUM
RCP	O.D.: 12"	O.D.: 24"
PVC	O.D.: 24"	O.D.: 36"
DIP	O.D.: 12"	O.D.: 24"

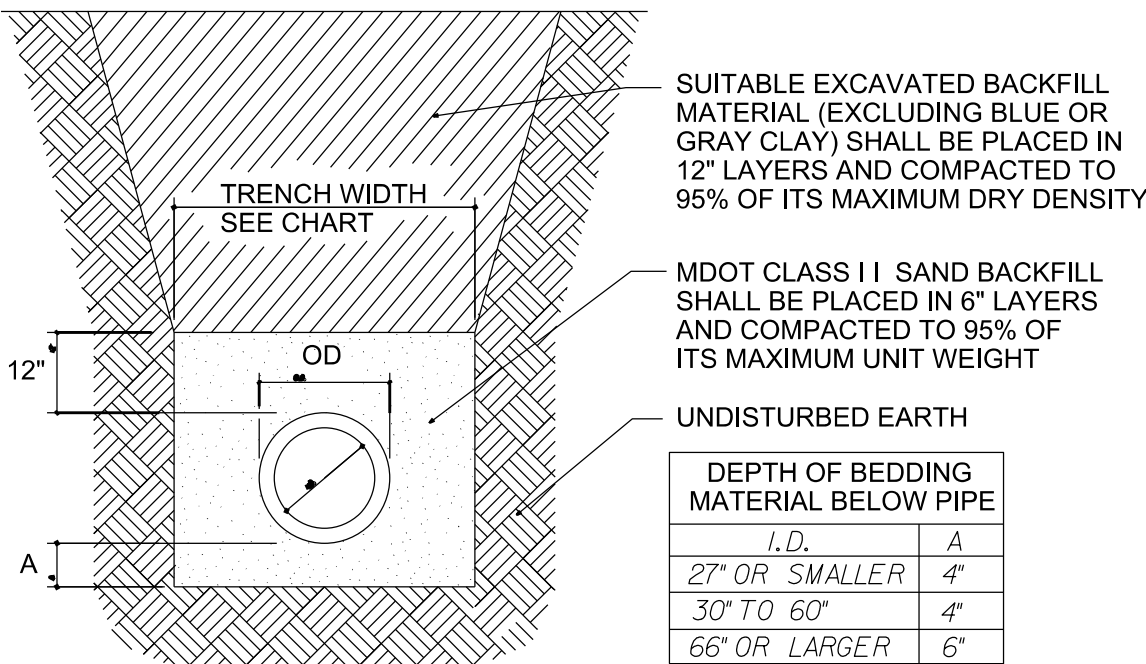
PIPE MATERIAL	TRENCH MINIMUM	WIDTH MAXIMUM
RCP	O.D.: 12"	O.D.: 24"
PVC	O.D.: 24"	O.D.: 36"
DIP	O.D.: 12"	O.D.: 24"



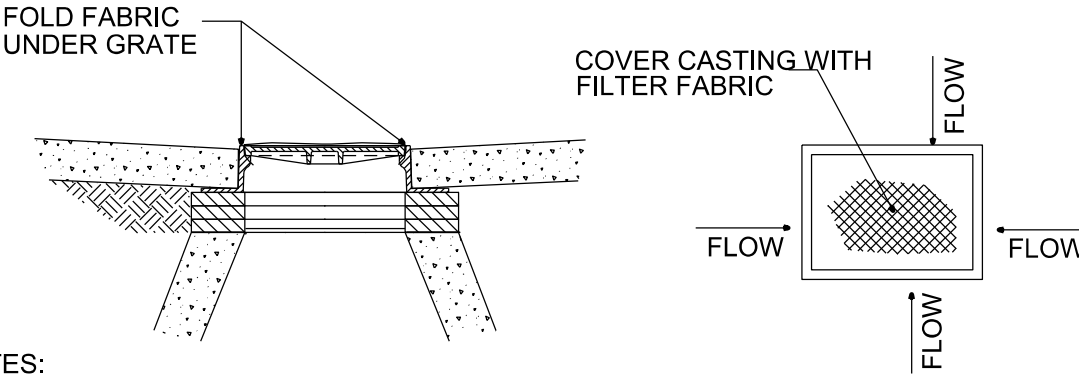
COMPACTED SAND BACKFILL
(FOR USE UNDER PAVEMENT AREAS)
PIPE BEDDING AND BACKFILL DETAIL
SCALE: NO SCALE



SILT FENCE
SCALE: NO SCALE



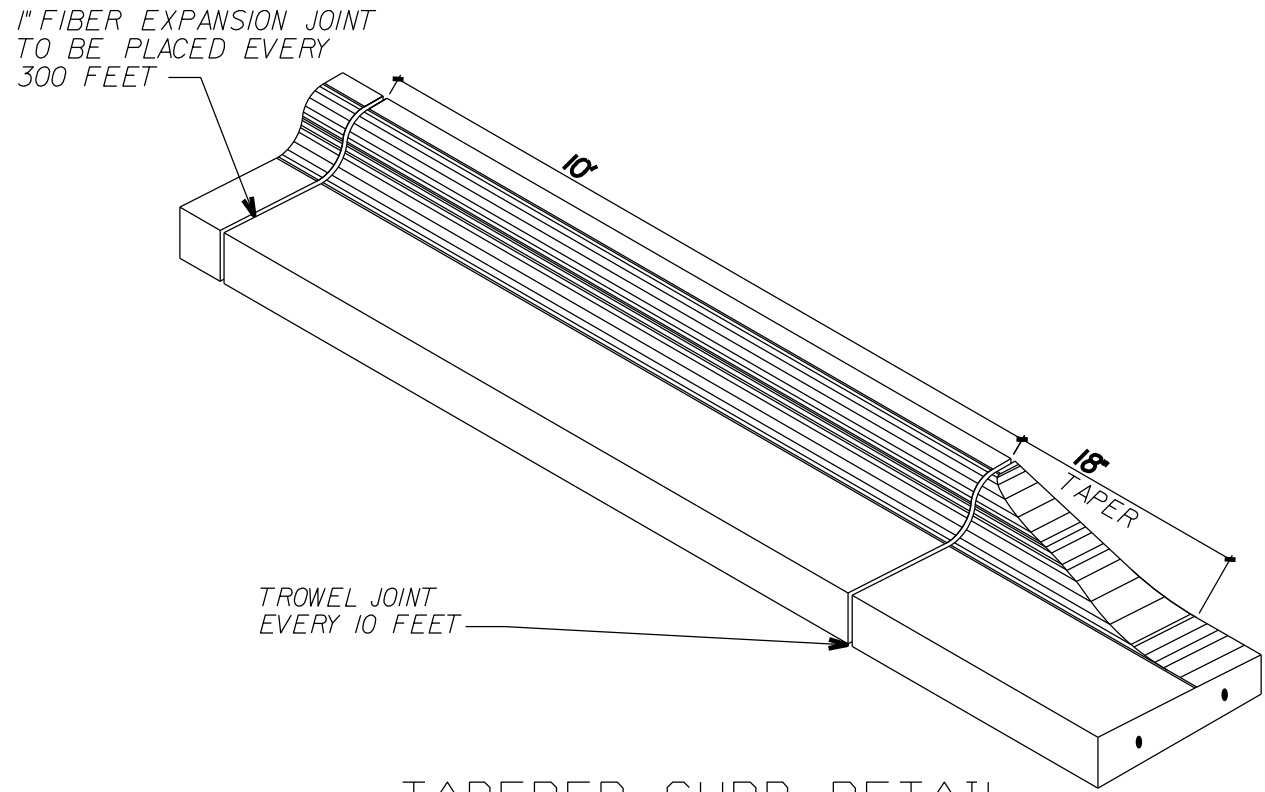
EXCAVATED MATERIAL BACKFILL
(FOR USE IN NON-PAVEMENT AREAS)
PIPE BEDDING AND BACKFILL DETAIL
SCALE: NO SCALE



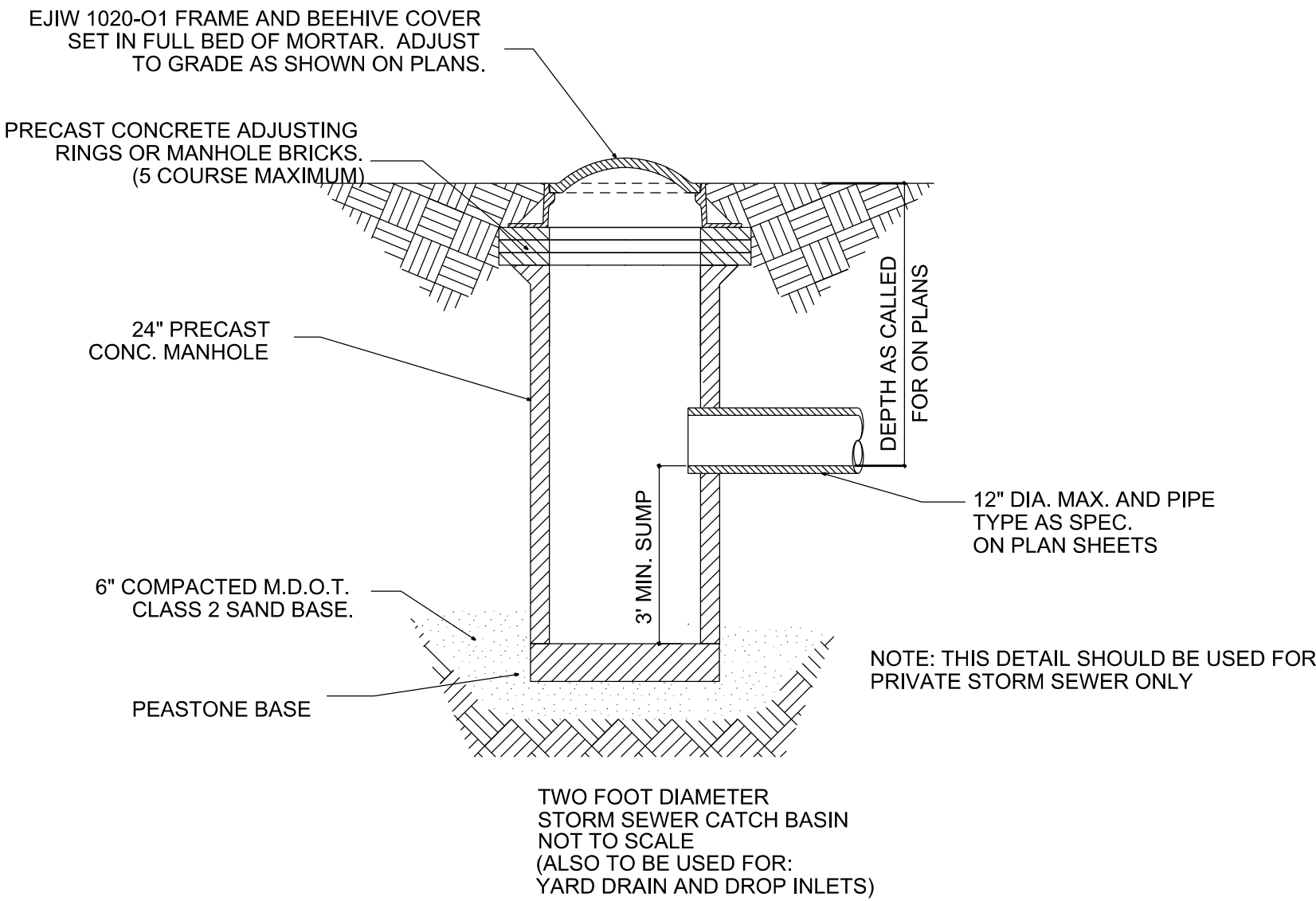
NOTES:

1. CLEAN FILTER WHEN FLOW BECOMES RESTRICTED.
2. FILTER FABRIC SHALL BE OF THE FOLLOWING OR AN APPROVED EQUIVALENT:
A) MIRAFI (NON-WOVEN) - CELANESE FIBERS MARKETING CO.
B) POLYFILTER X (WOVEN) - CARTHAGE MILLS
C) TYPAR (NON-WOVEN) - DUPONT COMPANY
D) OR APPROVED EQUAL
3. ALL MANHOLES, CATCH BASINS, AND CURB INLETS TO BE PROTECTED WITH THE FILTER FABRIC INLET FILTER SHOWN ABOVE.
4. REGULAR MAINTNANCE OF FILTERS SHALL BE PER SCHEDULE SET FORTH IN SOIL EROSION CONTROL PERMITS.

FILTER FABRIC INLET FILTER
SCALE: NO SCALE



TAPERED CURB DETAIL



BRSE ENGINEERING, LLC
38271 Stokelygh Drive
Lansing, MI 48910
Phone: (517) 719-5094
brseengineering@comcast.net

BRSE

INGHAM COUNTY LAND BANK
3024 TURNER ROAD
LANSING, INGHAM COUNTY, MI

IFC

BY	DATE
BRSE	9/14/22
BRSE	12/2/22
BRSE	2/7/23
BRSE	3/24/23

REVISED IN ACCORDANCE WITH CONSTRUCTION RECORDS

POINTE WEST CONDOMINIUMS
5-UNITS, 1 BUILDING
1290 W. SAGINAW
LANSING, INGHAM COUNTY, MI

SPECIFICATIONS & DETAILS

PROJECT NO.	DATE
BRSE	9/8/22
DRAWN BY	DATE
BRSE	9/8/22
ENGINEER	DATE
BRSE	9/8/22
CAD FILE	EDIT
SCALE	1"=10'
DRAWING	
PLOT SCALE	

PROJECT 0001
C6.0
SHEET NO.

FOR GENERAL REFERENCE ONLY
FIELD VERIFICATION OF ALL INFORMATION IS REQUIRED

QUANTITIES AS BID THIS SHEET

PS 26073

PHASE V SEGMENT 1 - 015N SEPARATION

NOTES:
3. NON-HAZARDOUS CONTAMINATED SOIL EXISTS BETWEEN APPROXIMATE STA. 5+70 AND 5+90 AT TB45.

BENCHMARKS:
T1 B.M. 1211 SET GEAR SPIKE NORTH SIDE P. POLE @ SE CORNER SAGINAW & BARTLETT. ELEV. 862.70
T1 B.M. 1212 SET GEAR SPIKE SOUTH SIDE P. POLE @ SW CORNER SAGINAW & CAREY. ELEV. 861.39
ALL TAX ROLL NUMBERS SHOWN THUS XXX-XXX ON THE PLANS ARE TO BE PRECEDED BY 33-01-01- (TYP.)

	RECORD DRAWINGS	12/12
	CONFORMING TO CONST. RECORDS	07/12
	CONFORMING TO CONST. RECORDS (WM)	03/12
2	F.O. 39	8/11/10
1	WCD 1	7/14/10
ISSUE	NATURE OF REVISION	DATE

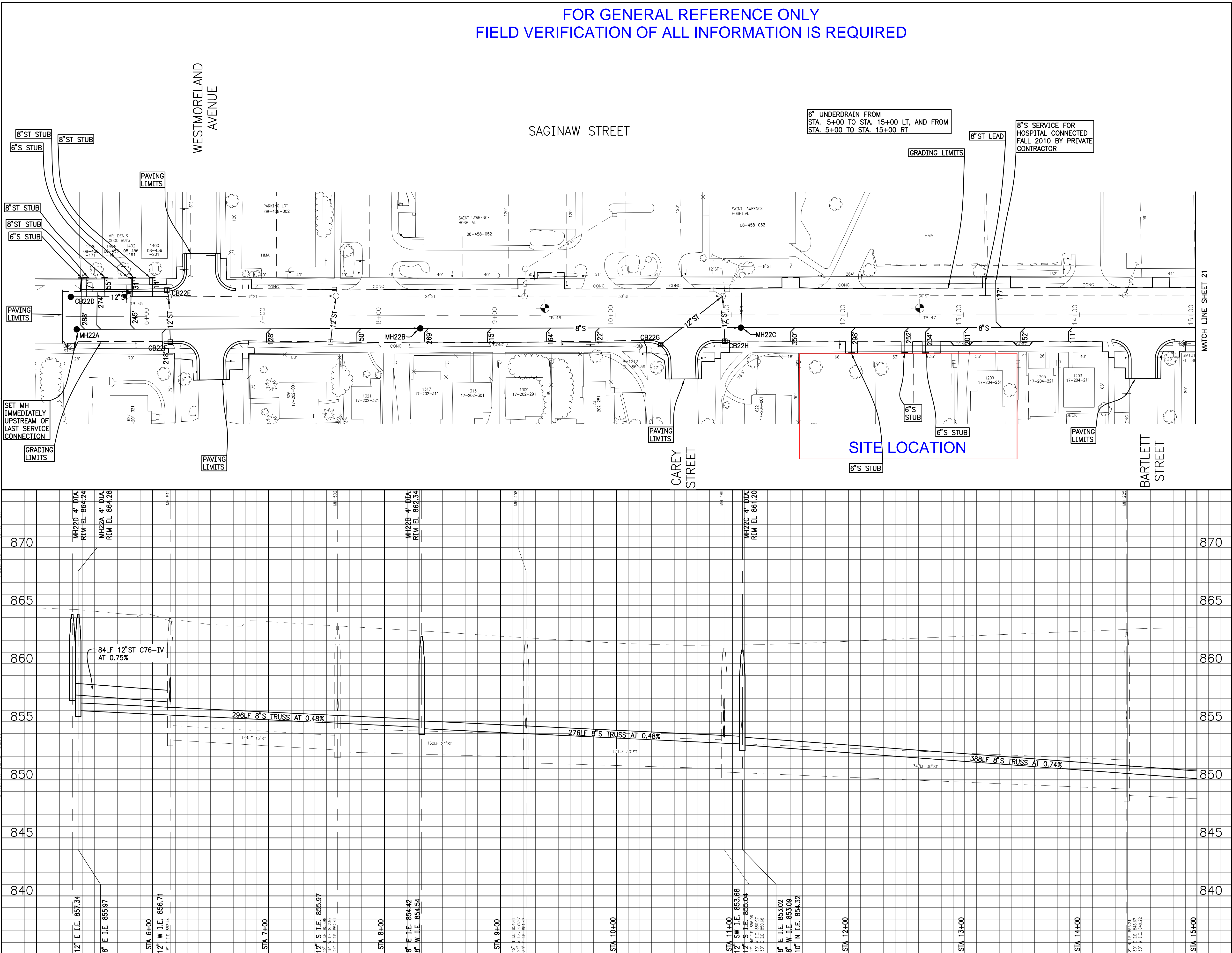
(2009-2011) PHASE V SEGMENT 1	
015N SEPARATION	
PRIME CONTRACTOR:	KAMMINGA & ROODVOETS, INC.
CONSTRUCTION ADMINISTRATOR:	CORY STENZEL-TT
CONSTRUCTION OBSERVATION BY:	JEREMIAH KILGORE-TT
T1 CONTRACT: 200-12741-07-001.S-3	DIVISION:

	DESIGNED: JCS/SLP	CHECKED: NMM/JTK
	CADD DATE: 2/12/2013	Shank, Jason
	PART: P:\JEN\12741\200-12741-07001\CAD\32 015N\B\122 SAGINAW STREET.dwg	

DEPARTMENT OF PUBLIC SERVICE
LANSING, MICHIGAN
SAGINAW STREET
STA. 5+00 TO STA. 15+00

APPROVED	FILE NO.
DEPARTMENT OF PUBLIC SERVICE	FILE
SCALE HORIZONTAL: 1"=40' VERTICAL: 1"=4'	6294
PROJECT NO. PS 26073	SHEET 122 OF 122 SHEETS

RECORD COPY



OPERATION	BY	DATE
BOARD OF WATER, LIGHT, & ELECTRIC		
CONSUMERS ENERGY - GAS		
CONSUMERS ENERGY - WATER		
CABLE TELEVISION - CATV		
FIRE DEPARTMENT		

OPERATION	BY	DATE
SAN. SEWER DESIGN - OK		
STORM SEWER DESIGN - OK		
SAN. SEWER QUANTITIES - OK		
STORM SEWER QUANTITIES - OK		
STORM SEWER QUANTITIES - OK		
PRELIMINARY R.O.W. - OK		

OPERATION	BY	DATE
SURVEYED		
PLAN CHECKED		
PROFILE PLOTTED		
PRELIMINARY GRADE		
GRADE INSPECTION		
SANITARY SEWER DESIGN		