STORM SEWER IMPROVEMENTS
THE SALVATION ARMY -THRIFT STORE
BAY CITY, MICHIGAN

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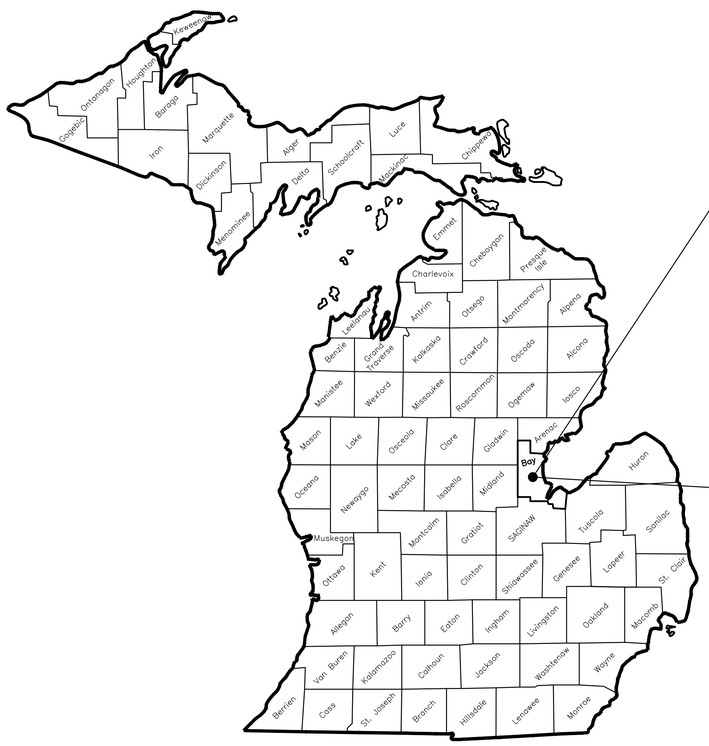
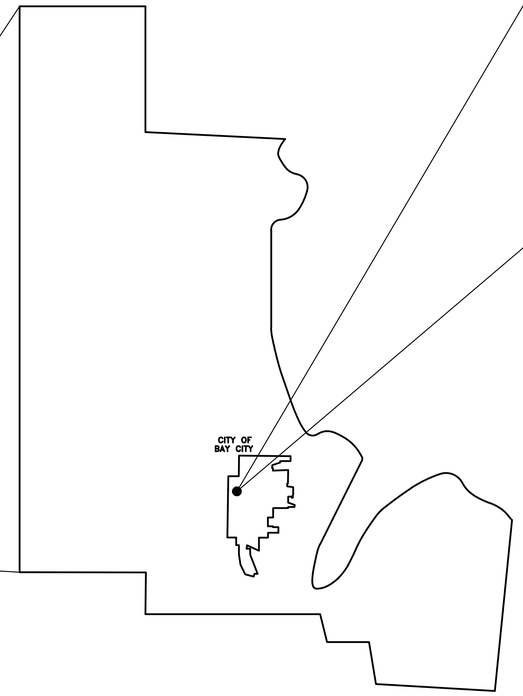
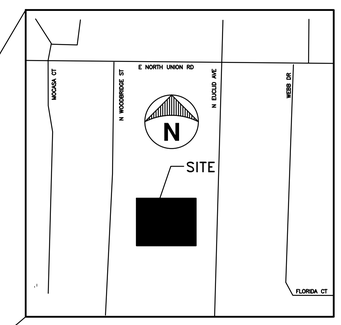
C2.1 SITE DEMOLITION PLAN
C3.1 NEW STORM SEWER LAYOUT PLAN
C4.1 MISCELLANEOUS SITE DETAILS







LOCATION MAP
NOT TO SCALE

Engineers-Architects-Consultants
William A. Kibbe & Associates, Inc.
1475 S. Washington Avenue, Saginaw, MI 48601

Engineers-Architects-Consultants
William A. Kibbe & Associates, Inc.
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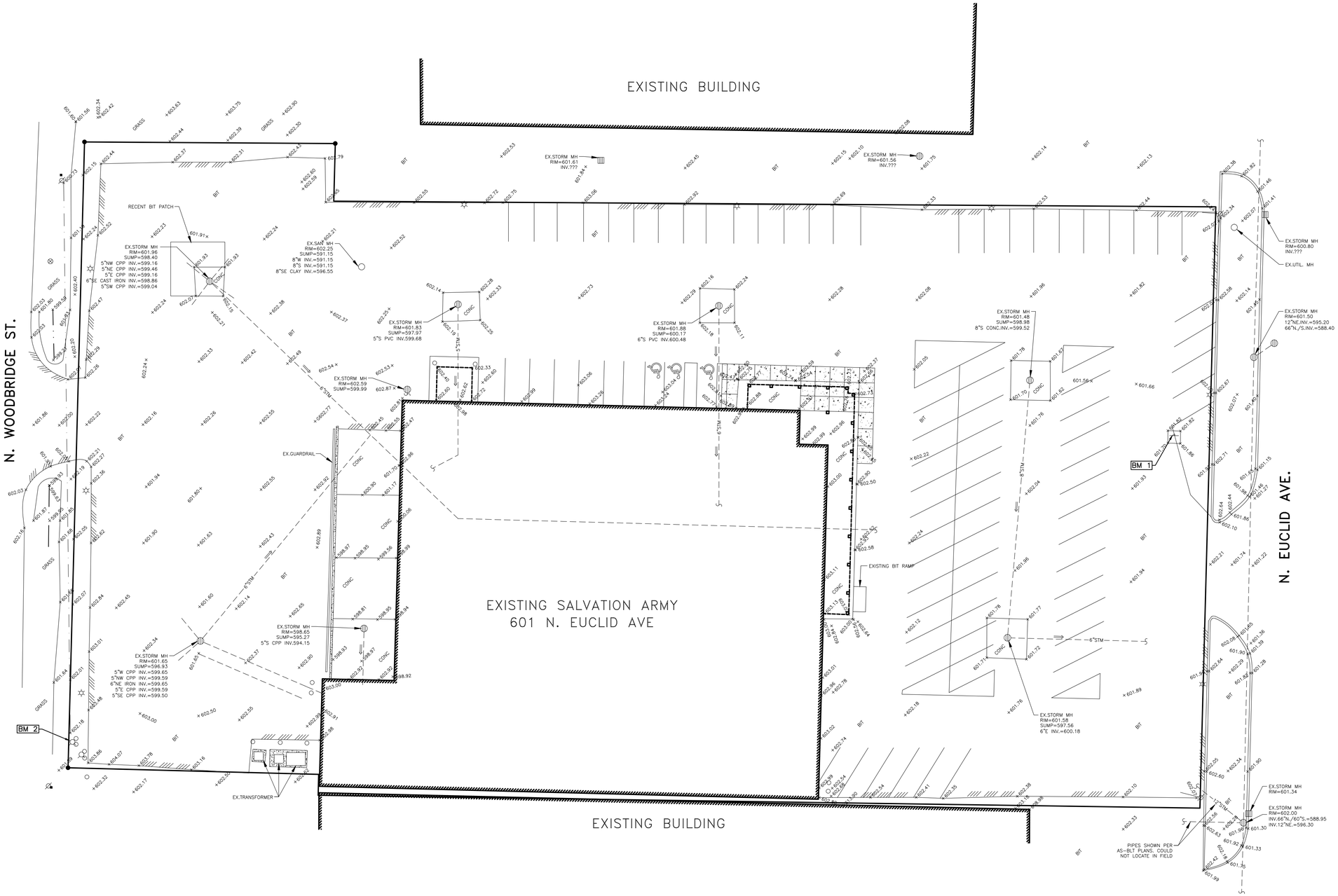
The Salvation Army - Thrift Store
Storm Sewer Improvemnts
601 N. Euclid Ave.
Bay City, MI 48706

TITLE SHEET

#	STATUS / REVISIONS	DATE
	MDOT SUBMITTAL	2/17/17
	ISSUED FOR BID	3/7/17

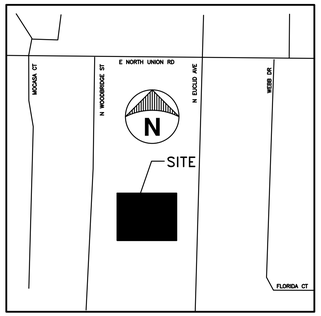
CHECKED BY: JCW
DESIGNED BY: JCW
DRAWN BY: TAG
SCALE: As Shown
PROJ. #: 16-2197-0325
DATE: 06-17-16
SHEET
TS

PRINTED:



EXISTING SITE LAYOUT PLAN

SCALE: 1" = 20'



LOCATION MAP

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LEGEND

- EX. SPOT GRADE
- EX. CENTERLINE DITCH
- EX. SANITARY SEWER W/MANHOLE
- EX. STORM SEWER
- EX. WATERMAIN
- EX. ELECTRIC LINE
- EX. CHAINLINK FENCE
- EX. WOOD FENCE
- EX. GAS LINE
- EX. TELEPHONE LINE
- EX. OVERHEAD UTILITY WIRES
- EX. SIGN WITH POST
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- EX. WATER OR GAS VALVE
- EX. UTILITY POLE
- EX. SEWER CLEANOUT
- EX. WATER WELL
- EX. LIGHT POLE
- EX. UTILITY RISER
- EX. MAILBOX

OWNER

THE SALVATION ARMY
10 W. ALGONQUIN RD
DES PLAINES, IL 60016

BENCHMARK

NO.1 NORTHWEST BOLT ON SIGN
ELEVATION = 602.80
(USGS DATUM)

NO.2 ARROW ON HYDRANT
ELEVATION = 605.60
(USGS DATUM)

UTILITY CONTACTS

TELEPHONE SERVICES
AMERITECH c/o
ENGINEERING DEPT.
ROOM 525
309 S. WASHINGTON AVENUE
SAGINAW, MICHIGAN 48607

GAS
CONSUMERS ENERGY
2400 WEISS STREET
SAGINAW, MICHIGAN 48602
(517) 791-5903

WATER AND SEWER
ENGINEERING DIVISION
301 WASHINGTON AVE.
BAY CITY MI. 48708
989-894-8181

ZONING
ZONING DIVISION
301 WASHINGTON AVE.
BAY CITY MI. 48708
989-894-8181

UTILITY NOTE

THE UTILITY LOCATIONS AS HEREIN SHOWN ARE BASED ON FIELD OBSERVATIONS AND A CAREFUL REVIEW OF MUNICIPAL AND UTILITY RECORDS. HOWEVER, IT IS NOT POSSIBLE TO DETERMINE THE PRECISE SIZE, LOCATION, DEPTH, PRESSURE, OR ANY OTHER CHARACTERISTICS OF UNDERGROUND UTILITIES, TANKS OR SEPTIC FIELDS WITHOUT EXCAVATION. THEREFORE, WE CANNOT GUARANTEE THE ACCURACY OF COMPLETENESS OF THE BURIED UTILITY INFORMATION HEREIN SHOWN. THE CONTRACTOR SHALL CALL "MISS DIG" AT (811) A MINIMUM OF THREE WORKING DAYS PRIOR TO ANY EXCAVATION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THESE LOCATIONS PRIOR TO CONSTRUCTION AND MAKE EVERY EFFORT TO PROTECT AND/OR RELOCATE THEM AS REQUIRED. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF DESIGN AS SOON AS POSSIBLE IN THE EVENT A DISCREPANCY IS FOUND.

811 Know what's below. Call before you dig.

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The Salvation Army - Thrift Store
Storm Sewer Improvemnts
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Bay City, MI 48706

EXISTING SITE LAYOUT PLAN

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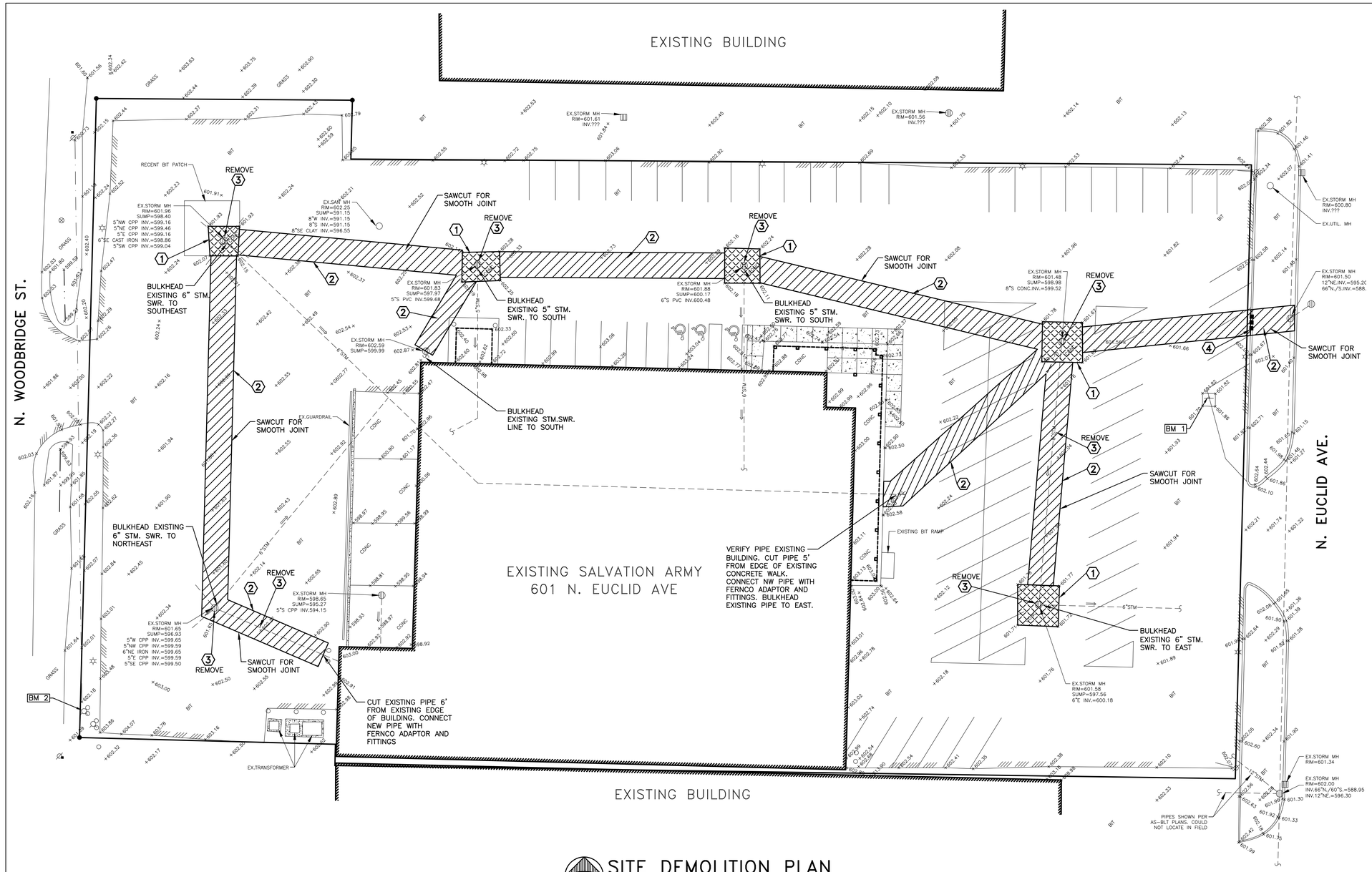
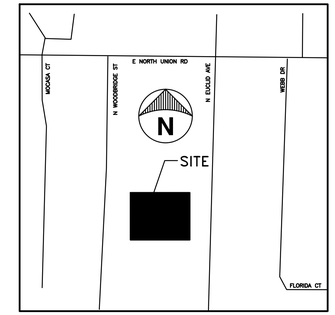


SITE DEMOLITION PLAN

SCALE: 1" = 20'



LOCATION MAP

NOT TO SCALE

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- EX. SPOT GRADE
- EX. CENTERLINE DITCH
- EX. SANITARY SEWER W/MANHOLE
- EX. STORM SEWER
- EX. WATERMAIN
- EX. ELECTRIC LINE
- EX. CHAINLINK FENCE
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- EX. TELEPHONE LINE
- EX. OVERHEAD UTILITY WIRES
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- EX. BITUMINOUS PAVEMENT
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- EX. STORM CURB INLET
- EX. STORM CATCH BASIN/MANHOLE
- EX. HYDRANT
- EX. WATER OR GAS VALVE
- EX. UTILITY POLE
- EX. SEWER CLEANOUT
- EX. WATER WELL
- EX. LIGHT POLE
- EX. UTILITY RISER
- EX. MAILBOX

DEMOLITION KEYED NOTES:

1. REMOVE EXISTING CONCRETE SURFACES. SAWCUT PER PLAN OR TO NEAREST JOINT. SEE NOTE 3 THIS SHEET.
   AREA REPRESENTED BY:
2. REMOVE EXISTING BITUMINOUS SURFACES AND BASE. SAWCUT PER PLAN OR TO NEAREST JOINT. SEE NOTE 3 THIS SHEET. STOCKPILE EXISTING STONE BASE ONSITE TO BE USED IN NEW PAVEMENT SECTIONS. SEE APPLICABLE DETAILS.
   AREA REPRESENTED BY:
3. REMOVE, RESET, ABANDON AND/OR RELOCATE EXISTING UG UTILITY SERVICES. COORDINATE WITH UTILITY COMPANY FOR EXACT LOCATION AND MECHANICAL ENGINEER, IF APPLICABLE.
4. REMOVE CURBING FULL DEPTH AS SHOWN. SAWCUT TO NEAREST JOINT.
   AREA REPRESENTED BY:

DEMOLITION NOTES:

1.) ALL DEMOLITION WORK SHALL CONFORM TO ALL LOCAL CODES AND ORDINANCES. ALL DEMOLITION OPERATIONS SHALL COMPLY WITH MIOSHA REGULATIONS INSOFAR AS THEY APPLY TO THE REQUIRED WORK. A SOIL EROSION CONTROL PLAN WILL BE REQUIRED PRIOR TO DEMOLITION.

2.) THE CONTRACTOR SHALL REMOVE AND CLEAR ALL TREES, BRUSH, FENCES, BUILDINGS, CURB AND PAVEMENT AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER WITHIN IMMEDIATE AREAS OF NEW CONSTRUCTION.

3.) ALL DEMOLITION MATERIAL SHALL BE PROPERLY REMOVED FROM THE SITE AND DISPOSED OF IN A LEGALLY DESIGNATED DISPOSAL AREA. NO ON-SITE BURNING WILL BE PERMITTED. PERMITS AND FEES FOR DISPOSAL OF DEMOLITION MATERIALSHALL BE OBTAINED AND PAID FOR BY THE CONTRACTOR.

4.) BACKFILL EXCAVATED AREAS WITH CLEAN GRANULAR FILL COMPACTED TO 95% DENSITY IN 12" LIFTS.

5.) AT THE CONCLUSION OF THE DEMOLITION OPERATIONS, THE ENTIRE WORK AREA SHALL BE LEFT IN A CLEAN CONDITION WITH ANY PROTECTIVE DEVICES AND BARRIERS REMOVED. ALL EXPOSED AREAS SHALL BE SUITABLE TOPSOIL, SEEDED AND MULCHED.

6.) CONTRACTOR TO VERIFY ALL UTILITIES WITHIN CONSTRUCTION INFLUENCE. NOTIFY ENGINEER OF ANY CONFLICTS.

7.) CONTRACTOR SHALL COORDINATE WITH ALL LOCAL UTILITY OWNERS, IE; AT&T, CONSUMERS ENERGY, CHARTER COMM., TOWNSHIP AND ALL OTHERS THAT WOULD APPLY TO THE DISTURBED AREA OF CONSTRUCTION.

8.) CONTRACTOR SHALL VERIFY CONSTRUCTION SCHEDULING AND NOTES ON EACH SHEET PRIOR TO DEMOLITION. DEMOLITION TO BE SCHEDULED WITH OWNER AND ENGINEER.

9.) CONTRACTOR TO VERIFY ANY SPRINKLER SYSTEM APPURTENANCES WITHIN PROPOSED NEW CONSTRUCTION AREAS, IF APPLICABLE. CONTRACTOR SHALL REMOVE AND RELOCATE PER THE SPRINKLER MANUFACTURER'S SPECIFICATIONS AND PER OWNER.

Know what's **below.**
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SITE DEMOLITION PLAN

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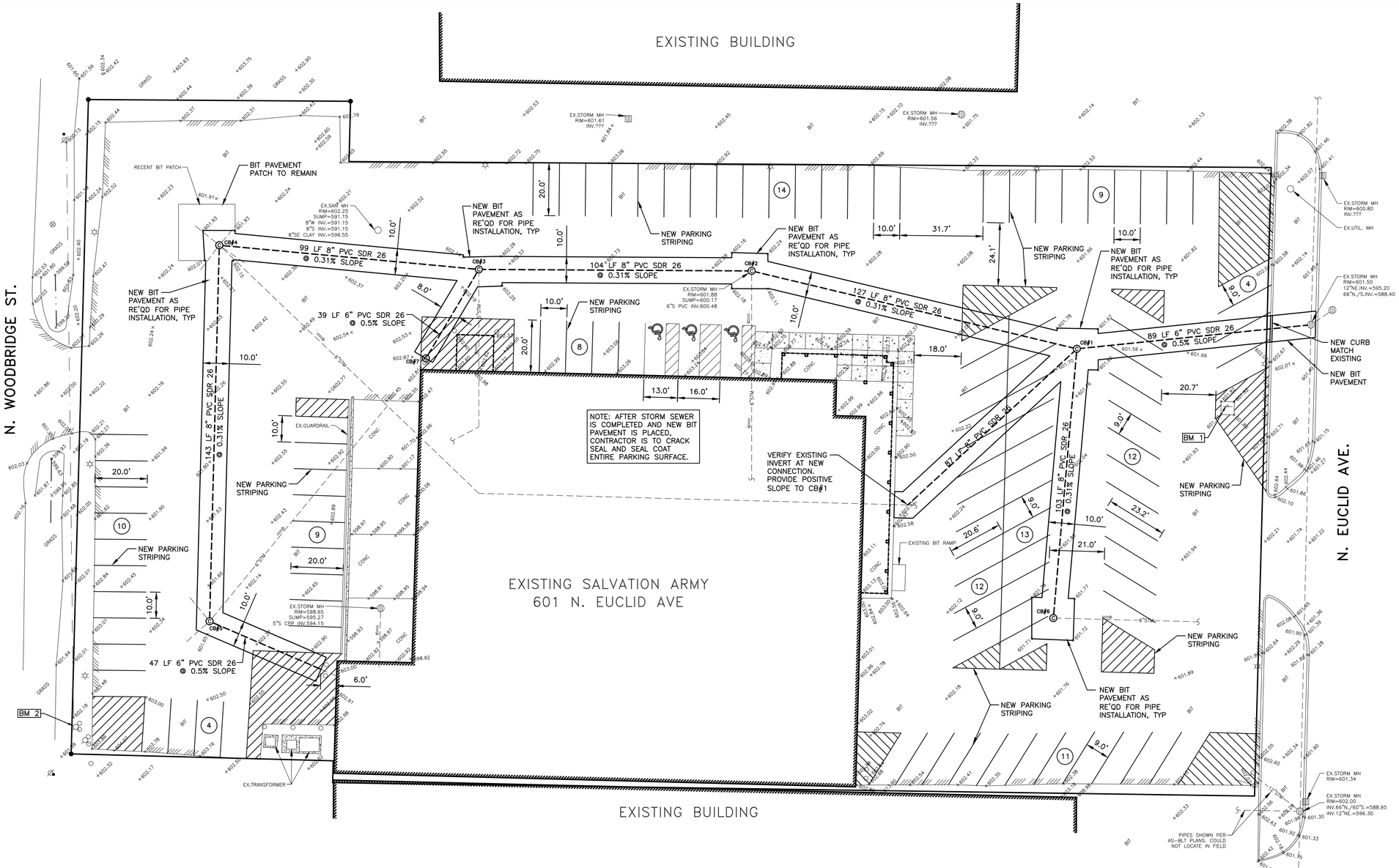
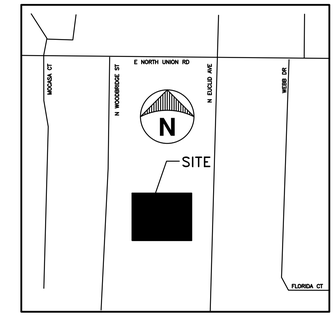


NEW SITE LAYOUT & STORM SEWER PLAN

SCALE: 1" = 20'



LOCATION MAP

NOT TO SCALE

LEGEND

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- EX. UTILITY POLE
- EX. SEWER CLEANOUT
- EX. WATER WELL
- EX. LIGHT POLE
- EX. UTILITY RISER
- EX. MAILBOX
- PROP. STORM CATCH BASIN/MANHOLE
- PROP. STORM SEWER
- PROP. BITUMINOUS PAVEMENT
- PROP. CONCRETE PAVEMENT

STRUCTURE SCHEDULE

CB#1
48" DIA PRECAST CONCRETE CATCH BASIN W/EJIW CASTING #1060, TYPE M1 GRATE
RIM=601.40
INV.6"E.=595.64
INV.8"S./SW./W.=595.64

CB#2
36" DIA PRECAST CONCRETE CATCH BASIN W/EJIW CASTING #1060, TYPE M1 GRATE
RIM=601.80
INV.8"E./W.=596.03

CB#3
36" DIA PRECAST CONCRETE CATCH BASIN W/EJIW CASTING #1060, TYPE M1 GRATE
RIM=601.80
INV.8"E./W.=596.35
INV.6"SW.=596.35

CB#4
36" DIA PRECAST CONCRETE CATCH BASIN W/EJIW CASTING #1060, TYPE M1 GRATE
RIM=601.90
INV.5"NW.=599.16
INV.5"NE.=599.46
INV.5"SE.=599.16
INV.5"SW.=599.04
INV.8"E./S.=596.65

CB#5
36" DIA PRECAST CONCRETE CATCH BASIN W/EJIW CASTING #1060, TYPE M1 GRATE
RIM=601.60
INV.5"W.=599.65
INV.5"NW.=599.59
INV.5"E.=599.59
INV.5"SE.=599.50
INV.6"SE.=597.09
INV.8"N.=597.09

CB#6
36" DIA PRECAST CONCRETE CATCH BASIN W/EJIW CASTING #1060, TYPE M1 GRATE
RIM=601.50
INV.8"N.=595.95

CB#7
36" DIA PRECAST CONCRETE CATCH BASIN W/EJIW CASTING #1060, TYPE M1 GRATE
RIM=602.50
INV.6"NE.=599.00

GENERAL GRADING NOTES:

1. THE CONTRACTOR SHALL CALL "MISS DIG" (811) 3 WORKING DAYS BEFORE DIGGING ON THE PROJECT TO VERIFY EXISTING UNDERGROUND UTILITIES.
2. THE EXISTING UTILITIES SHOWN ON THESE PLANS HAVE BEEN DRAWN IN ACCORDANCE TO THE INFORMATION PROVIDED. ALL UTILITIES SHALL BE FIELD LOCATED BY THE CONTRACTOR PRIOR TO CROSSING. ANY CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
3. DURING THE LIFE OF THE PROJECT, THE CONTRACTOR SHALL CONFORM TO ACT No. 451, PUBLIC ACTS OF 1994, RELATIVE TO THE SOIL EROSION AND SEDIMENTATION CONTROL ACT.
4. MATCH EXISTING BIT. PAVEMENT ALONG NEW STORM TRENCH AREAS WHERE APPLICABLE.
5. ALL UTILITY WORK SHALL CONFORM TO THE LATEST BAY COUNTY AND OR MDOT SPECIFICATIONS.
6. ALL ENGINEERED FILL SHALL BE ADEQUATELY COMPACTED BY ROLLING TO PRODUCE A SURFACE SATISFACTORY FOR THE INSTALLATION OF BASE COURSE AND PAVING.
7. THE SITE EXCAVATION CONTRACTOR SHALL VERIFY THE EXISTING SANITARY, WATER AND STORM SEWER CONNECTION DEPTHS PRIOR TO ANY EXCAVATION.
8. BACKFILL ALL TRENCHES UNDER SLABS, WALKS AND PAVED AREAS WITH COMPACTED SAND BACKFILL MDOT CL.II. COMPACTION SHALL BE 95% MAXIMUM UNIT WEIGHT AS DETERMINED BY MODIFIED PROCTOR.
9. THE CONTRACTOR SHALL COMPLY WITH ALL STATE AND LOCAL REGULATIONS FOR WORK AT THE SITE. THIS SHALL INCLUDE MIOSHA REGULATIONS.
10. THE CONTRACTOR/DEVELOPER SHALL PAY FOR AND OBTAIN ALL BUILDING PERMITS, LOCAL PERMITS AND PAY ALL CHARGES FOR ANY INSPECTION AND TESTING.
11. THE CONTRACTOR SHALL CONTROL NOISE, CARRY OUT A PROGRAM OF DUST CONTROL AND SHALL ALLOW NO ON-SITE BURNING.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING UP THE PREMISES AND UPON COMPLETION OF THE PROJECT LEAVE THE SITE IN AN ACCEPTABLE CONDITION AS DETERMINED BY THE ENGINEER OR THE OWNER.
13. ALL CATCH BASIN BACKS AND COVERS SHALL COMPLY WITH NPDES PHASE II REQUIREMENTS, EG. "DUMP NO WASTE! DRAINS TO RIVERS" SHALL BE PERMANENTLY CAST INTO BACK AND COVER.
14. MAINTAIN POSITIVE DRAINAGE FLOW TO ALL CATCH BASINS.

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NEW SITE LAYOUT & STORM SEWER PLAN

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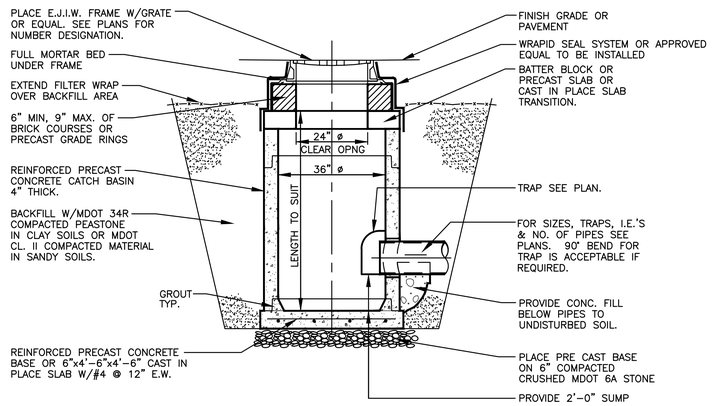
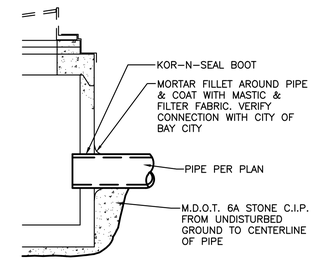


1 / C4.1 TYPICAL CONCRETE CATCHBASIN DETAIL

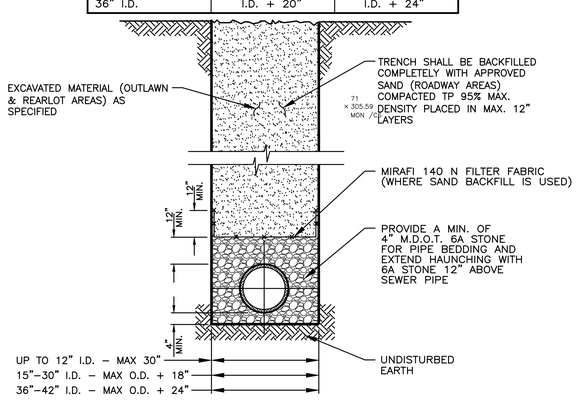
NOT TO SCALE



3 / C4.1 CONNECT TO EXISTING MANHOLE CATCH BASIN DETAIL

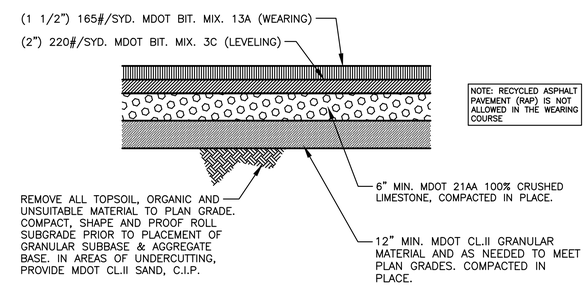
NOT TO SCALE

PIPE SIZE	TRENCH WIDTH MINIMUM	TRENCH WIDTH MAXIMUM
8" & 10"	24"	30"
12" & 15"	30"	36"
18"	34"	40"
21"	38"	42"
24"	42"	46"
27"	45"	49"
30"	49"	53"
36"	56"	60"
LARGER THAN 36" I.D.	I.D. + 20"	I.D. + 24"



2 / C4.1 D.W.PE., H.D.PE., P.V.C. & A/D 2000, TYPICAL SEWER PIPE TRENCH DETAIL

NOT TO SCALE



4 / C4.1 TYPICAL PAVEMENT SECTION REGULAR DUTY AREAS

NOT TO SCALE

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MISCELLANEOUS SITE DETAILS

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