

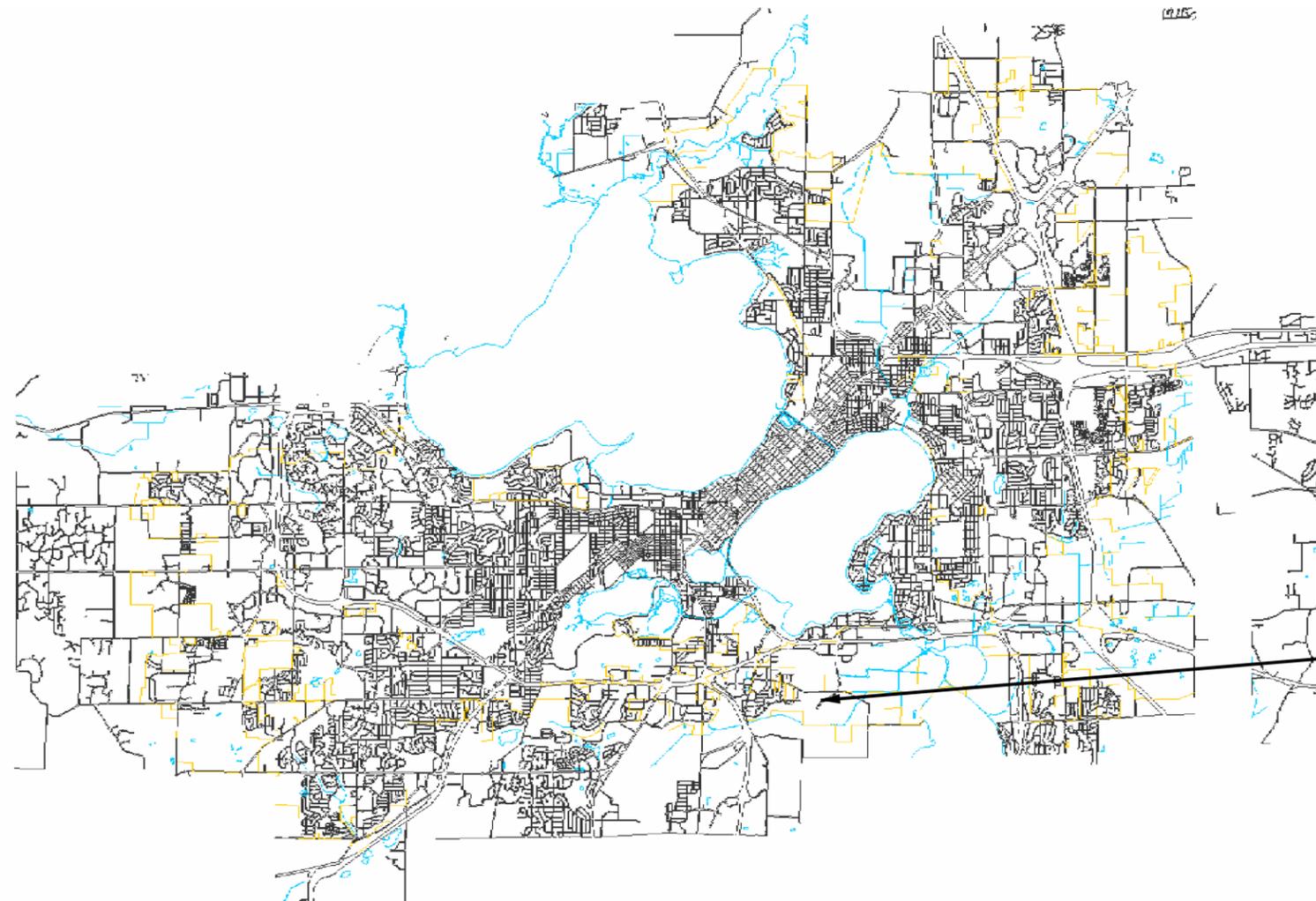
- SHEET 1.1 PROJECT LOCATION AND SITE ACCESS
- SHEET 1.2 DEMOLITION AND PROTECTION PLAN
- SHEET 1.3 SITE PLAN
- SHEET 1.4 UTILITY PLAN
- SHEET 1.5 GRADING AND EROSION CONTROL PLAN
- SHEET 1.6 ASPHALT PATH SECTION
- SHEET 1.7 BASKETBALL HOOP AND POLE DETAIL
- SHEET 1.8 TYPICAL PLAYGROUND SURFACING WITH UNDERDRAIN
- SHEET 1.9 ASPHALT EDGE AT PLAYGROUND
- SHEET 1.10 DESIGN CALCULATIONS

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HIGHLAND MANOR PARK IMPROVEMENTS CONTRACT # 7466



HIGHLAND MANOR PARK
 13 MANOR DRIVE
 MADISON, WI 53713

PROJECT:

*HIGHLAND
 MANOR PARK
 IMPROVEMENTS*

*HIGHLAND MANOR
 PARK
 13 MANOR DR
 MADISON, WI 53713*

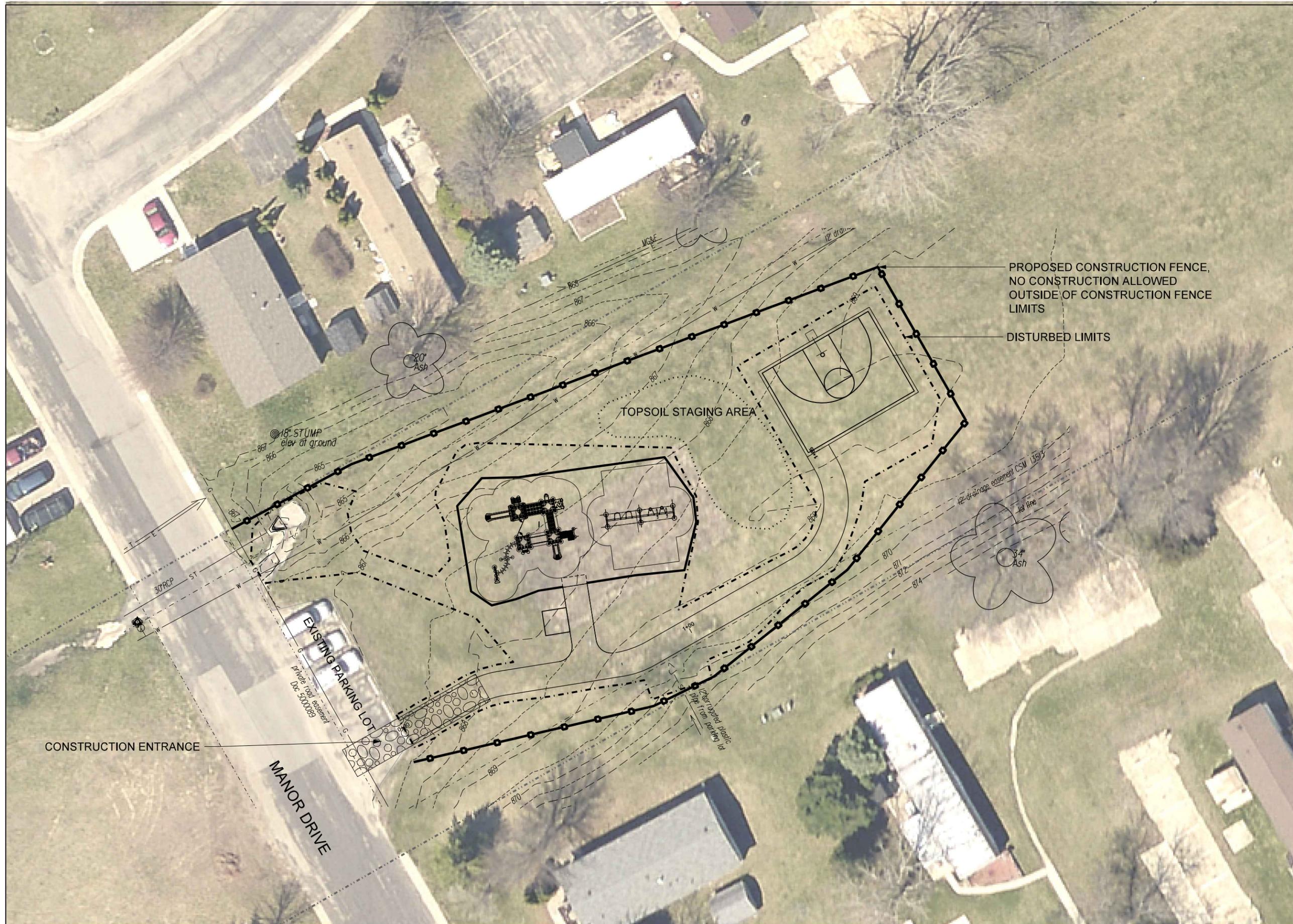
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ITEM	DATE
Drawn by:	xx-xx-xxxx
Approved by:	xx-xx-xxxx

PUBLIC WORKS PROJECT #:
7466

SHEET TITLE:
COVER SHEET

SHEET NUMBER:



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Graphical Scale



PROJECT:

*HIGHLAND
 MANOR PARK
 IMPROVEMENTS*

*HIGHLAND MANOR
 PARK
 13 MANOR DR
 MADISON, WI 53713*

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PUBLIC WORKS PROJECT #:

7466

SHEET TITLE:

*PROJECT LOCATION
 AND SITE ACCESS*

SHEET NUMBER:

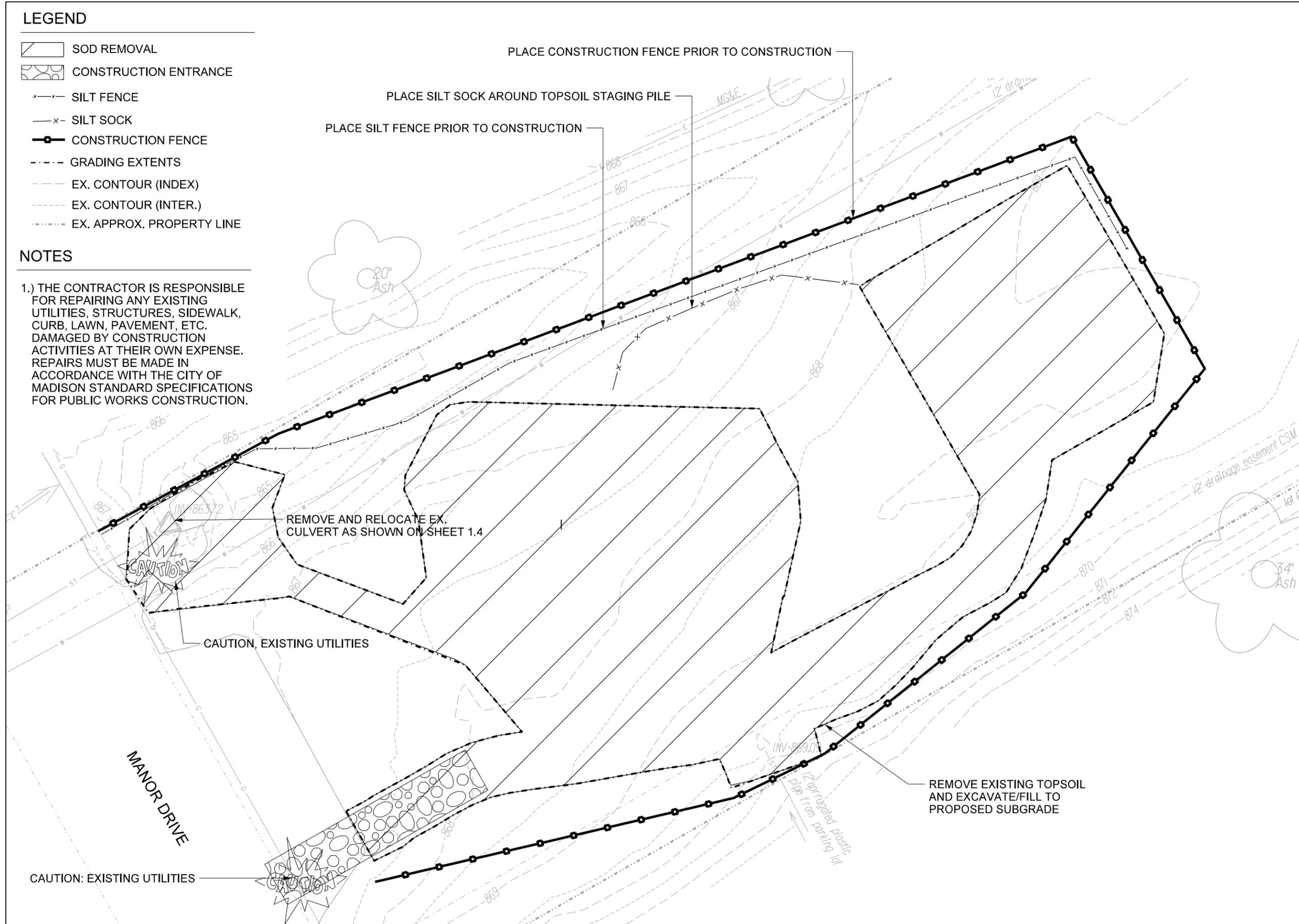
1.1

LEGEND

-  SOD REMOVAL
-  CONSTRUCTION ENTRANCE
-  SILT FENCE
-  SILT SOCK
-  CONSTRUCTION FENCE
-  GRADING EXTENTS
-  EX. CONTOUR (INDEX)
-  EX. CONTOUR (INTER.)
-  EX. APPROX. PROPERTY LINE

NOTES

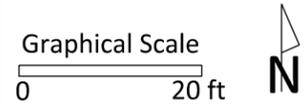
1.) THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY EXISTING UTILITIES, STRUCTURES, SIDEWALK, CURB, LAWN, PAVEMENT, ETC. DAMAGED BY CONSTRUCTION ACTIVITIES AT THEIR OWN EXPENSE. REPAIRS MUST BE MADE IN ACCORDANCE WITH THE CITY OF MADISON STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.



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PROJECT:

HIGHLAND
MANOR PARK
IMPROVEMENTS

HIGHLAND MANOR
PARK
13 MANOR DR
MADISON, WI 53713

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PUBLIC WORKS PROJECT #:
7466

SHEET TITLE:
DEMOLITION AND PROTECTION PLAN

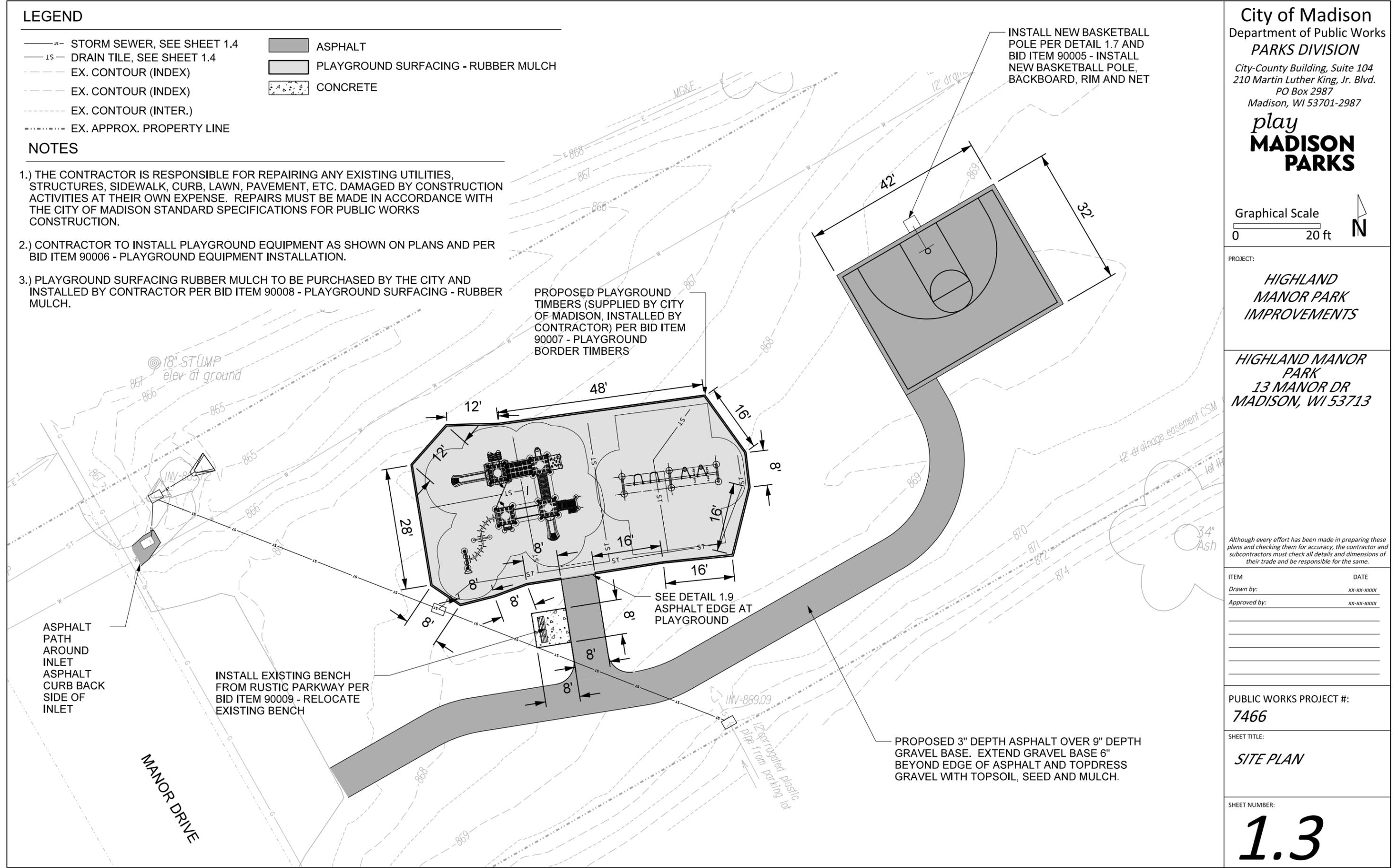
SHEET NUMBER:
1.2

LEGEND

- 18" — STORM SEWER, SEE SHEET 1.4
- 15" — DRAIN TILE, SEE SHEET 1.4
- - - EX. CONTOUR (INDEX)
- - - EX. CONTOUR (INDEX)
- - - EX. CONTOUR (INTER.)
- - - - - EX. APPROX. PROPERTY LINE
- ASPHALT
- ▨ PLAYGROUND SURFACING - RUBBER MULCH
- CONCRETE

NOTES

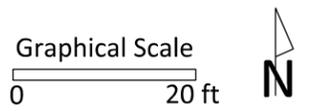
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- 2.) CONTRACTOR TO INSTALL PLAYGROUND EQUIPMENT AS SHOWN ON PLANS AND PER BID ITEM 90006 - PLAYGROUND EQUIPMENT INSTALLATION.
- 3.) PLAYGROUND SURFACING RUBBER MULCH TO BE PURCHASED BY THE CITY AND INSTALLED BY CONTRACTOR PER BID ITEM 90008 - PLAYGROUND SURFACING - RUBBER MULCH.



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PROJECT:
HIGHLAND
MANOR PARK
IMPROVEMENTS

HIGHLAND MANOR
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PUBLIC WORKS PROJECT #:
7466

SHEET TITLE:
SITE PLAN

SHEET NUMBER:
1.3

LEGEND

- ST**— DRAIN TILE, SEE SHEET 1.8
- 15**— STORM SEWER
- - - EX. CONTOUR (INDEX)
- - - EX. CONTOUR (INTER.)
- - - EX. APPROX. PROPERTY LINE
- ASPHALT
- PLAYGROUND SURFACING - RUBBER MULCH
- CONCRETE

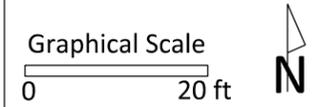
NOTES

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PROJECT:
HIGHLAND MANOR PARK IMPROVEMENTS

HIGHLAND MANOR PARK
13 MANOR DR
MADISON, WI 53713

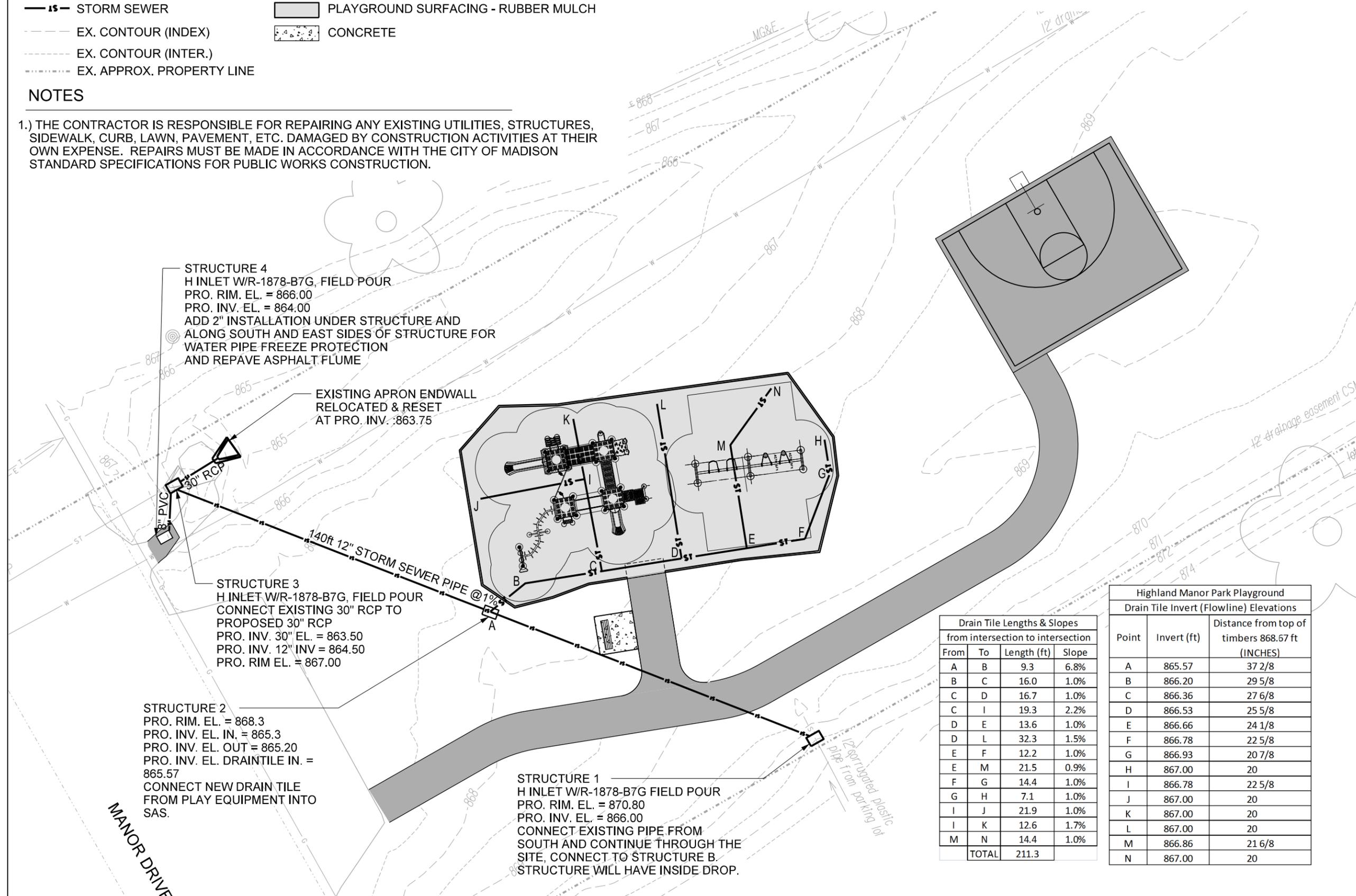
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PUBLIC WORKS PROJECT #:
7466

SHEET TITLE:
UTILITY PLAN

SHEET NUMBER:
1.4



STRUCTURE 4
H INLET W/R-1878-B7G, FIELD POUR
PRO. RIM. EL. = 866.00
PRO. INV. EL. = 864.00
ADD 2" INSTALLATION UNDER STRUCTURE AND ALONG SOUTH AND EAST SIDES OF STRUCTURE FOR WATER PIPE FREEZE PROTECTION AND REPAVE ASPHALT FLUME

EXISTING APRON ENDWALL RELOCATED & RESET AT PRO. INV. :863.75

STRUCTURE 3
H INLET W/R-1878-B7G, FIELD POUR
CONNECT EXISTING 30" RCP TO PROPOSED 30" RCP
PRO. INV. 30" EL. = 863.50
PRO. INV. 12" INV = 864.50
PRO. RIM EL. = 867.00

STRUCTURE 2
PRO. RIM. EL. = 868.3
PRO. INV. EL. IN. = 865.3
PRO. INV. EL. OUT = 865.20
PRO. INV. EL. DRAINTILE IN. = 865.57
CONNECT NEW DRAIN TILE FROM PLAY EQUIPMENT INTO SAS.

STRUCTURE 1
H INLET W/R-1878-B7G FIELD POUR
PRO. RIM. EL. = 870.80
PRO. INV. EL. = 866.00
CONNECT EXISTING PIPE FROM SOUTH AND CONTINUE THROUGH THE SITE, CONNECT TO STRUCTURE B.
STRUCTURE WILL HAVE INSIDE DROP.

Drain Tile Lengths & Slopes			
from intersection to intersection			
From	To	Length (ft)	Slope
A	B	9.3	6.8%
B	C	16.0	1.0%
C	D	16.7	1.0%
C	I	19.3	2.2%
D	E	13.6	1.0%
D	L	32.3	1.5%
E	F	12.2	1.0%
E	M	21.5	0.9%
F	G	14.4	1.0%
G	H	7.1	1.0%
I	J	21.9	1.0%
I	K	12.6	1.7%
M	N	14.4	1.0%
TOTAL		211.3	

Highland Manor Park Playground		
Drain Tile Invert (Flowline) Elevations		
Point	Invert (ft)	Distance from top of timbers 868.67 ft (INCHES)
A	865.57	37 2/8
B	866.20	29 5/8
C	866.36	27 6/8
D	866.53	25 5/8
E	866.66	24 1/8
F	866.78	22 5/8
G	866.93	20 7/8
H	867.00	20
I	866.78	22 5/8
J	867.00	20
K	867.00	20
L	867.00	20
M	866.86	21 6/8
N	867.00	20

LEGEND

- 868.8 + PRO. SPOT ELEVATION
- + 868.79 EX. SPOT ELEVATION
- x— SILT SOCK
- x—x— SILT FENCE
- - - - CONTOUR (INDEX)
- - - - CONTOUR (INTER.)
- - - - EX. CONTOUR (INDEX)
- - - - EX. CONTOUR (INTER.)
- - - - EX. APPROX. PROPERTY LINE
- ASPHALT
- PLAYGROUND SURFACING - RUBBER MULCH
- CONCRETE
- CONSTRUCTION ENTRANCE
- - - - GRADING EXTENTS
- CONSTRUCTION FENCE

EDGE OF PLAYGROUND BORDER TIMBERS: 868.67
 ELEVATION OF FINISHED PLAYGROUND SURFACING 868.50
 PLAYGROUND SURFACE SUBGRADE: 867.92
 ASPHALT AT PLAYGROUND ELEVATION: 868.50

PLACE 12" HIGH STONE
 WEEPER AROUND
 RELOCATED
 APRON END WALL

MATCH
 BASKETBALL
 COURT GRADE

MATCH PARKING
 LOT GRADE
 868.20 +/-

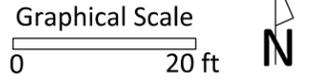
NOTES

1. 4 OZ PERMEABLE NON-WOVEN LANDSCAPE FABRIC OVER ENTIRE PLAYGROUND SUBGRADE PER SHEET 1.9.
2. PLAYGROUND EQUIPMENT SHALL BE INSTALLED WITH APPROPRIATE ELEVATIONS RELATIVE TO PROPOSED FINISHED SURFACE ELEVATIONS FOR PLAYGROUND SURFACING AS DEFINED ON PLANS.
3. ALL DISTURBED AREAS SHALL RECEIVE EROSION MATTING, CLASS I URBAN TYPE A - ORGANIC

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PROJECT:
**HIGHLAND
 MANOR PARK
 IMPROVEMENTS**

**HIGHLAND MANOR
 PARK
 13 MANOR DR
 MADISON, WI 53713**

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ITEM	DATE
Drawn by:	xx-xx-xxxx
Approved by:	xx-xx-xxxx

PUBLIC WORKS PROJECT #:
7466

SHEET TITLE:
**GRADING AND
 EROSION CONTROL
 PLAN**

SHEET NUMBER:
1.5

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PROJECT:

*HIGHLAND
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IMPROVEMENTS*

*HIGHLAND MANOR
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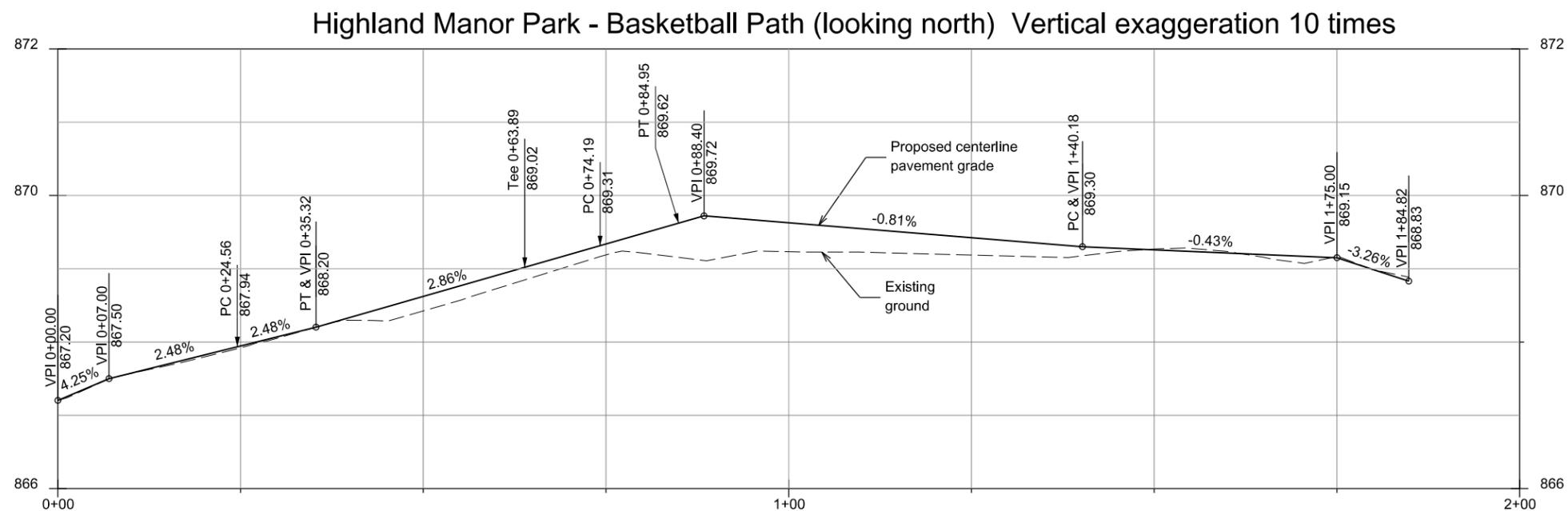
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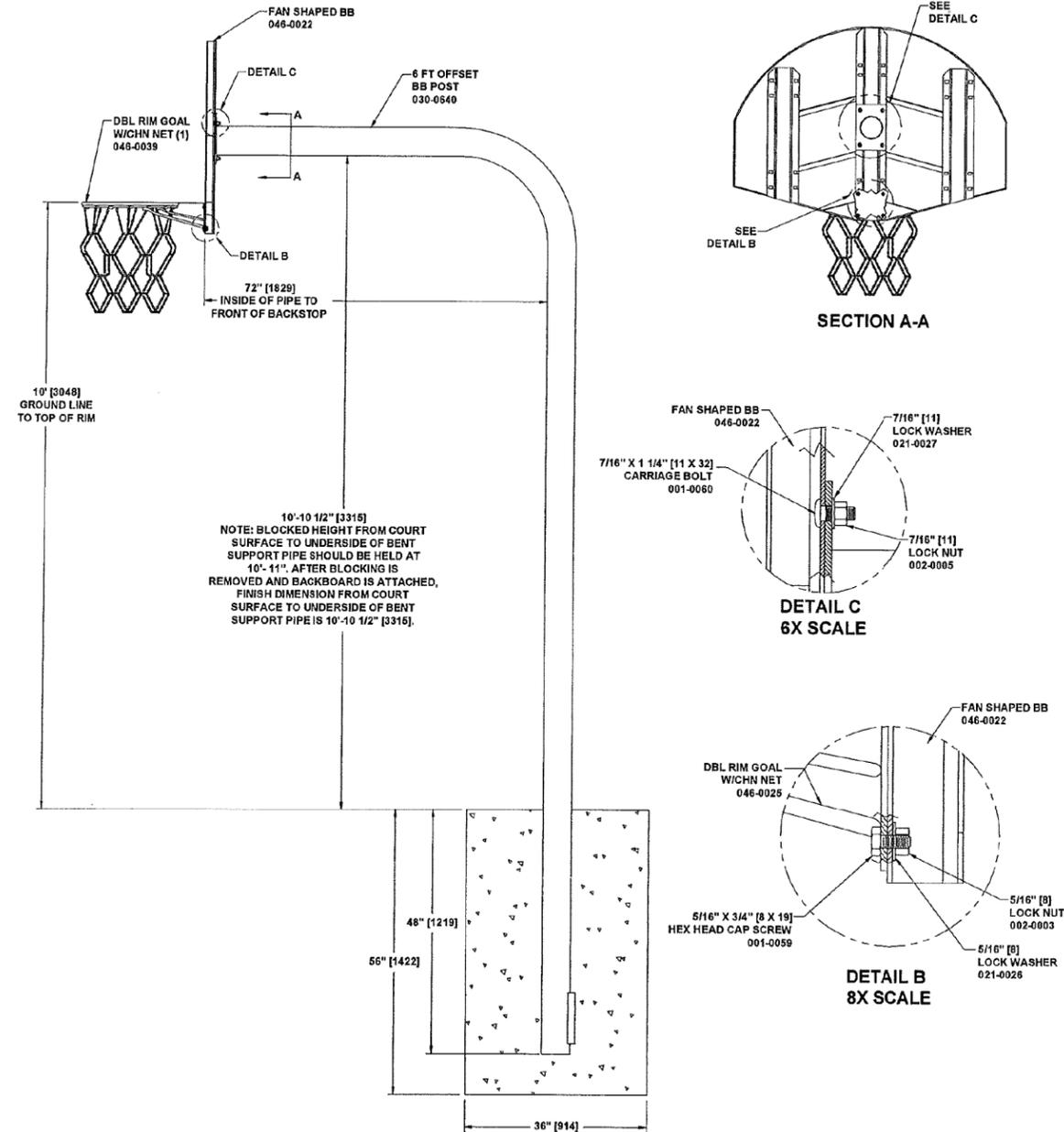
SHEET TITLE:
**ASPHALT
PATH SECTION**

SHEET NUMBER:
1.6





8/10/00



590-0057
FAN BB DBL RIM CHN 6' (1)

BCI Burke Company, LLC P.O. Box 549 Fond du Lac, Wisconsin 54936-0549 Telephone 1-800-356-2070

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PROJECT:

HIGHLAND MANOR PARK IMPROVEMENTS

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7466

SHEET TITLE:
BASKETBALL HOOP AND POLE DETAIL

SHEET NUMBER:
1.7

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PROJECT:
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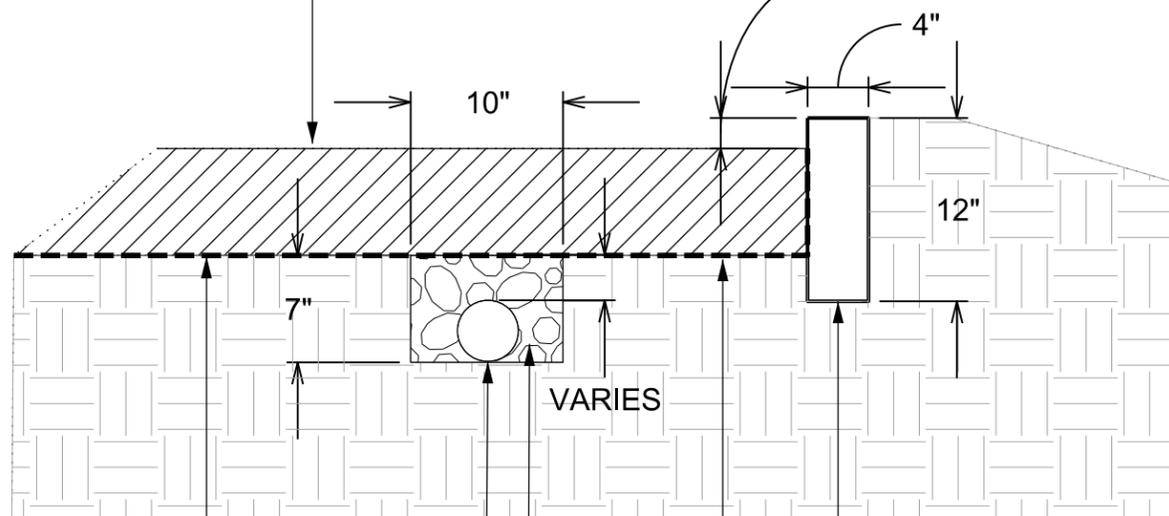
PUBLIC WORKS PROJECT #:
7466

SHEET TITLE:
**TYPICAL PLAYGROUND
 SURFACING WITH
 UNDERDRAIN**

SHEET NUMBER:
1.8

PLAYGROUND SURFACING

2" LIP BETWEEN PLAYGROUND BORDER TIMBERS AND FINAL PLAYGROUND SURFACING GRADE



TEXTILE FABRIC TYPE SAS NON WOVEN (MIN. 4 OZ/SY)

4 INCH PERFORATED PVC DRAIN PIPE WITH 'SOCK'
 PITCHED MINIMUM OF 0.5% SLOPE

OPEN GRADED BASE COURSE WI DOT GRADATION
 NO. 2 AS SPECIFIED IN SECTION 501.2.5.4.4 OF WI
 DOT STANDARD SPECIFICATIONS

PLAYGROUND SUBGRADE
 - MIN. 7" FROM PLAYGROUND SURFACE FINISHED
 GRADE FOR SHREDDED RUBBER MULCH

PROPOSED PLAYGROUND BORDER
 TIMBERS PER MANUFACTURER'S
 INSTALLATION SPECIFICATIONS

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PROJECT:

*HIGHLAND
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 IMPROVEMENTS*

*HIGHLAND MANOR
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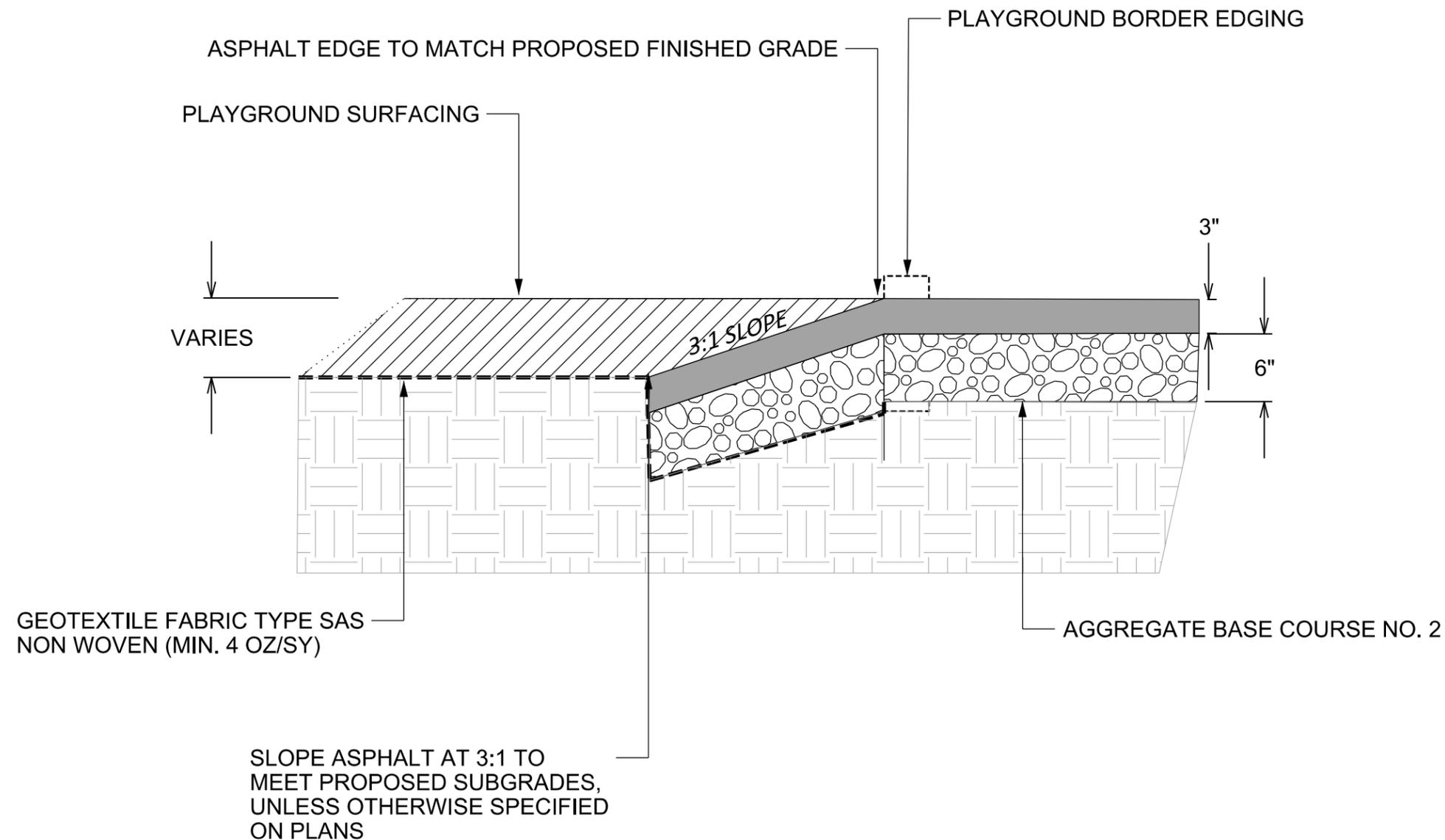
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Approved by:	xx-xx-xxxx

PUBLIC WORKS PROJECT #:
7466

SHEET TITLE:
*ASPHALT EDGE
 AT PLAYGROUND*

SHEET NUMBER:
1.9



Highland Manor Park Playground Basketball & Path - Earthwork Quantities

City of Madison, WI Public Works Contract
Date Revised: Jan 20 2015

Notes:

Positive volumes are cuts, negative volumes are fills.
Not all parts of all surface models (Digital Terrain Models) are used for computations or intended for actual construction.

Existing HiManor_Survey2014-08-27.dtm
Proposed HighManor_Park_Pro3.dtm

Sort	Grp	Material	Item	From Surface Model	To Surface Model	area (sq ft)	depth (ft)	Unfactored volume (cu ft)	Unfactored volume (cu yd)	Expansion Factor (%)	Factored (Uncompacted) Volume (cu yd)
1.1	Grass to Grass	Topsoil Excavate	Strip 6in topsoil	n/a	n/a	4066	0.50	2033	75.3	0%	75.3
1.2	Grass to Grass	Subsoil Excavate	Excavate subsoil to subgrade	Ex-6in	Pro-6in	4066	varies	42	1.6	0%	1.6
1.3	Grass to Grass	Subsoil Place	Place subsoil to subgrade	Ex-6in	Pro-6in	4066	varies	-1242	-46.0	0%	-46.0
1.4	Grass to Grass	Topsoil Place	Place 6in topsoil	n/a	n/a	4066	-0.50	-2033	-75.3	0%	-75.3
1.5	Grass to Grass	Storm Sewer (placeholder volume)	Path & Playground: estimated volume of new storm structure & full length of 12in pipe (to adjust subsoil place volume)	n/a	n/a	n/a	n/a	-308	-11.4	0%	-11.4
1.6	Grass to Grass	Subsoil Place	Path & Playground: estimated volume of new storm structure & full length of 12in pipe (to adjust subsoil place volume)	n/a	n/a	n/a	n/a	308	11.4	0%	11.4
2.1	Grass to Asphalt	Topsoil Excavate	Strip 6in topsoil	n/a	n/a	3300	0.50	1650	61.1	0%	61.1
2.2	Grass to Asphalt	Subsoil Excavate	Excavate subsoil to pavement subgrade	Ex-6in	Pro-12in	3300	varies	1355	50.2	0%	50.2
2.3	Grass to Asphalt	Subsoil Place	Place subsoil to pavement subgrade	Ex-6in	Pro-12in	3300	varies	-8	-0.3	0%	-0.3
2.4	Grass to Asphalt	Gravel Place	Place 9in gravel base out 6in from pavement edges	n/a	n/a	3300	-0.75	-2475	-91.7	0%	-91.7
2.5	Grass to Asphalt	Asphalt Place	Place 3in asphalt	n/a	n/a	3031	-0.25	-758	-28.1	0%	-28.1
2.6	Grass to Asphalt	Topsoil Place	Place 3in topsoil on 6in wide gravel edge	n/a	n/a	269	-0.25	-67	-2.5	0%	-2.5
3.1	Grass to Concrete	Topsoil Excavate	Strip 6in topsoil	n/a	n/a	77	0.50	39	1.4	0%	1.4
3.2	Grass to Concrete	Subsoil Excavate	Excavate subsoil to pavement subgrade	Ex-6in	Pro-11in	77	varies	0	0.0	0%	0.0
3.3	Grass to Concrete	Subsoil Place	Place subsoil to pavement subgrade	Ex-6in	Pro-11in	77	varies	-7	-0.2	0%	-0.2
3.4	Grass to Concrete	Gravel Place	Place 6in gravel base out 6in from pavement edges	n/a	n/a	77	-0.50	-39	-1.4	0%	-1.4
3.5	Grass to Concrete	Concrete Place	Place 5in concrete	n/a	n/a	64	-0.42	-27	-1.0	0%	-1.0
3.6	Grass to Concrete	Topsoil Place	Place 5in topsoil on 6in wide gravel edge	n/a	n/a	13	-0.42	-5	-0.2	0%	-0.2
4.1	Grass to Play Surface	Topsoil Excavate	Strip 6in topsoil	n/a	n/a	2721	0.50	1361	50.4	0%	50.4
4.2	Grass to Play Surface	Subsoil Excavate	Excavate subsoil to play subgrade	Ex-6in	Pro-7in	2721	varies	52	1.9	0%	1.9
4.3	Grass to Play Surface	Subsoil Place	Place subsoil to play subgrade	Ex-6in	Pro-7in	2721	varies	-1704	-63.1	0%	-63.1
4.4	Grass to Play Surface	Play Surface Place	Place 9in uncompacted rubber chips (expected to compact to 7in)	n/a	n/a	2721	-0.58	-1587	-58.8	29%	-75.6
5.1	Grass to Border Timber	Topsoil Excavate	Strip 6in topsoil	n/a	n/a	68	0.50	34	1.3	0%	1.3
5.2	Grass to Border Timber	Subsoil Excavate	Excavate subsoil to pavement subgrade	Ex-6in	Pro-12in	68	varies	9	0.3	0%	0.3
5.3	Grass to Border Timber	Subsoil Place	Place subsoil to pavement subgrade	Ex-6in	Pro-12in	68	varies	-33	-1.2	0%	-1.2
5.4	Grass to Border Timber	Border Timber Place (Placeholder Volume)	Place Border Timbers (placeholder volume to balance volume computations)	n/a	n/a	68	-1.00	-68	-2.5	0%	-2.5
6.1	Adjust	Asphalt Place	Asphalt - Place ramp in play surface to subgrade (8ft wide, 2.25 ft @ 3:1 slope)	n/a	n/a	18	-0.25	-5	-0.2	0%	-0.2
6.2	Adjust	Gravel Place	Path Gravel - place under ramp in play surface	n/a	n/a	25	-0.75	-19	-0.7	0%	-0.7
6.3	Adjust	Subsoil Place	Reduce subsoil place in play area by 1/2 of path ramp asphalt/gravel volume	n/a	n/a	n/a	n/a	12	0.4	0%	0.4
6.4	Adjust	Play Surface Place	Reduce play surface volume by 1/2 of path ramp asphalt/gravel volume	n/a	n/a	n/a	n/a	12	0.4	0%	0.4

7.1	Adjust	Subsoil Excavate	Drain tile - approx 210 ft x 1ft wide x average 2 ft deep	n/a	n/a	210	2.00	420	15.6	0%	15.6
7.2	Adjust	Drain Tile Stone Place	Drain tile stone - approx 210 ft x 1ft wide x average 2 ft deep (approx - includes volume of pipe itself)	n/a	n/a	210	-2.00	-420	-15.6	0%	-15.6
8.01	NW Storm	Topsoil Excavate	NW storm sewer - strip topsoil (preliminary quantity)	n/a	n/a	1011	0.50	506	18.7	0%	18.7
8.02	NW Storm	Pavement Excavate	NW storm sewer - remove paved drainage ditch from road to existing storm sewer	n/a	n/a	150	0.50	75	2.8	0%	2.8
8.03	NW Storm	Subsoil Excavate	NW storm sewer - gross subsoil excavation (preliminary quantity)	Ex-6in	Pro-6in	1161	varies	83	3.1	0%	3.1
8.04	NW Storm	Subsoil Place	NW storm sewer - gross subsoil placement (preliminary quantity)	Ex-6in	Pro-6in	1161	varies	-601	-22.3	0%	-22.3
8.05	NW Storm	Topsoil Place	NW storm sewer - place 6in topsoil	n/a	n/a	1138	-0.50	-569	-21.1	0%	-21.1
8.06	NW Storm	Gravel Place	NW storm sewer - place 6in gravel base under asphalt around Storm Sewer Structure C	n/a	n/a	23	-0.50	-12	-0.4	0%	-0.4
8.07	NW Storm	Asphalt Place	NW storm sewer - place 3in asphalt around Storm Sewer Structure C	n/a	n/a	23	-0.25	-6	-0.2	0%	-0.2
8.08	NW Storm	Subsoil Place	NW storm sewer - reduce subsoil place by volume of asphalt & gravel more than 6in below surface (to balance volume comps)	n/a	n/a	23	0.25	6	0.2	0%	0.2
8.09	NW Storm	Storm Sewer (placeholder volume)	NW storm sewer - approx volume of new storm structures & pipe within surface model (to adjust subsoil volumes). Excludes 140ft 12in pipe in separate item.	n/a	n/a	n/a	n/a	-190	-7.0	0%	-7.0
8.10	NW Storm	Subsoil Place	NW storm sewer - reduce subsoil place volume by approx volume of new storm structures & pipe within surface model. Excludes 140ft 12in pipe in separate item.	n/a	n/a	n/a	n/a	190	7.0	0%	7.0

Row Labels	Sum of Factored (Uncompacted) Volume (cu yd)	Notes / check calculations
Asphalt Place	-28.4	Asphalt = 3049 sq ft x 3in = 28.2 cu yd; + 23 sq ft x 3in (around storm structure C) = 0.2 cu yd = 28.4 cu yd total x 2.16 ton/cu yd = 61.3 ton
Border Timber Place (Placeholder Volume)	-2.5	Not part of bid quantities
Concrete Place	-1.0	Concrete (8x8ft bench pad) = 64 sq ft x 5in = 1.0 cu yd
Gravel Place	-94.2	94 cu yd x 2 ton/cu yd = 188 ton
Pavement Excavate	2.8	Pavement Excavate = existing ditch off road at NW corner of park
Play Surface Place	-75.1	Play surface 2721 sq ft x 9in uncompacted = 76 cu yd, less portion in asphalt ramp = 75 cu yd
Storm Sewer (placeholder volume)	-18.4	Not part of bid quantities
Subsoil Excavate	72.6	
Subsoil Place	-114.0	
Topsoil Excavate	208.2	
Topsoil Place	-99.1	
Drain Tile Stone Place	-15.6	(Part of drain tile lump sum)
Grand Total	-164.8	
Net of topsoil & subsoil	68 cu yd (positive = extra material left over)	

Reorganized into bid table items

Bid Item	Quantity	Units	Relation to Table Above
Excavation Cut	75	CY	Pavement Excavate+Subsoil Excavate
Fill Borrow *	114	CY	Subsoil Place + some Topsoil Excavate
Strip Topsoil	208	CY	Topsoil Excavate (x 6 = 1,248 SY)
Topsoil Redistribution	99	CY	Topsoil Place (x 6 = 594 SY)
Hauling & Disposal	71	CY	Pavement Excavate + Topsoil & Subsoil Excavate & Place (removed from site)

* a total of 114 CY of Fill Borrow is needed, partly supplied by the 73 CY of Subsoil Excavate. The remainder of the Fill Borrow will be Topsoil Excavate (114 - 73 = 41 CY), leaving only (208 - 99 - 41) = 68 CY extra topsoil to be removed from the site. Any topsoil used as Fill Borrow will only be used in the side slopes, and under the play equipment.

City of Madison
Department of Public Works
PARKS DIVISION

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play
MADISON
PARKS

PROJECT:

HIGHLAND
MANOR PARK
IMPROVEMENTS

HIGHLAND MANOR
PARK
13 MANOR DR
MADISON, WI 53713

Although every effort has been made in preparing these plans and checking them for accuracy, the contractor and subcontractors must check all details and dimensions of their trade and be responsible for the same.

ITEM DATE
Drawn by: SCL 01-06-2015
Rev DCR 01-20-2015

PUBLIC WORKS PROJECT #:
7466

SHEET TITLE:
DESIGN
CALCULATIONS

SHEET NUMBER:
1.10