



State of West Virginia
 Department of Administration
 Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

Request for Quotation

RFQ NUMBER
RJC2010

PAGE
1

ADDRESS CORRESPONDENCE TO ATTENTION OF:
BUYER 32
304-558-0492

VENDOR

RFQ COPY
 TYPE NAME/ADDRESS HERE

SHIP TO

REG'L JAIL & CORR'L AUTH'Y
 1325 VIRGINIA STREET EAST
 CHARLESTON, WV
 25301 304-558-2110

DATE PRINTED 04/23/2006	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
-----------------------------------	---------------	----------	--------	---------------

BID OPENING DATE: **05/11/2006** BID OPENING TIME **01:30PM**

LINE	QUANTITY	UOP	CAT. NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
0001	1	JB		968-20		
ADDENDUM NO. 1 CHANGES TO THE SPECIFICATIONS AS PER THE ATTACHED CONSTRUCTION						
***** THIS IS THE END OF RFQ RJC2010 ***** TOTAL:						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE	TELEPHONE	DATE
TITLE	FEIN	ADDRESS CHANGES TO BE NOTED ABOVE

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'

**GENERAL TERMS & CONDITIONS
(REQUEST FOR QUOTATION) RFQ AND (REQUEST FOR PROPOSAL) RFP**

1. Awards will be made in the best interest of the State of West Virginia.
2. The State may accept or reject in part, or in whole, any bid.
3. All quotations are governed by the *West Virginia Code* and the *Legislative Rules* of the Purchasing Division.
4. Prior to any award, the apparent successful vendor must be properly registered with the Purchasing Division and have paid the required \$45 fee.
5. All services performed or goods delivered under State Purchase Orders/Contracts are to be continued for the term of the Purchase Order/Contracts, contingent upon funds being appropriated by the Legislature or otherwise being made available. In the event funds are not appropriated or otherwise available for these services or goods, this Purchase Order/Contract becomes void and of no effect after June 30.
6. Payment may only be made after the delivery and acceptance of goods or services.
7. Interest may be paid for late payment in accordance with the *West Virginia Code*.
8. Vendor preference will be granted upon written request in accordance with the *West Virginia Code*.
9. The State of West Virginia is exempt from Federal and State taxes and will not pay or reimburse such taxes.
10. The Director of Purchasing may cancel any Purchase Order/Contract upon 30 days written notice to the seller.
11. The laws of the State of West Virginia and the *Legislative Rules* of the Purchasing Division shall govern all rights and duties under the Contract, including without limitation the validity of this Purchase Order/Contract.
12. Any reference to automatic renewal is hereby deleted. The Contract may be renewed only upon mutual written agreement of the parties.
13. **BANKRUPTCY:** In the event the vendor/contractor files for bankruptcy protection, this contract is automatically null and void, and is terminated without further order.
14. **HIPAA Business Associate Addendum** - The West Virginia State Government HIPAA Business Associate Addendum (BAA), approved by the Attorney General, and available online at the Purchasing Division's web site (<http://www.state.wv.us/admin/purchase/vrc/hipaa.htm>) is hereby made part of the agreement. Provided that, the Agency meets the definition of a Covered Entity (45 CFR ü160.103) and will be disclosing Protected Health Information (45 CFR ü160.103) to the vendor.

INSTRUCTIONS TO BIDDERS

1. Use the quotation forms provided by the Purchasing Division.
2. **SPECIFICATIONS:** Items offered must be in compliance with the specifications. Any deviation from the specifications must be clearly indicated by the bidder. Alternates offered by the bidder as **EQUAL** to the specifications must be clearly defined. A bidder offering an alternate should attach complete specifications and literature to the bid. The Purchasing Division may waive minor deviations to specifications.
3. Complete all sections of the quotation form.
4. Unit prices shall prevail in cases of discrepancy.
5. All quotations are considered F.O.B. destination unless alternate shipping terms are clearly identified in the quotation.
6. **DUPLICATE BIDS:** All quotations must be delivered by the bidder to the respective offices listed below prior to the date and time of the bid opening. Failure of the bidder to deliver the quotations on time will result in bid disqualifications.

ORIGINAL SIGNED BID TO:

Department of Administration
Purchasing Division
2019 Washington Street East
Post Office Box 50130
Charleston, WV 25305-0130

DUPLICATE BID TO:

State Auditor's Office
Bid Observer
Building 1 Room W114
1900 Kanawha Boulevard, East
Charleston, WV 25305-0230

**Sign in Sheet – Building Construction Mandatory Pre Bid Meeting
Rubenstein Center for Youth**

Davis, West Virginia
Architect's Project No. 12545.312
Tuesday, April 18, 2006

Representative	Company	Address	Phone
✓ WARREN GREGORY	G.A. BROWN & SON	215 MILL STREET FAIRMONT WV 26554	304 363-4500
✓ CHARLIE HARPER	MID-STATE MELN, INC	P.O. Box 607 BRIDGEPORT WV 26330	304 623-3171
Keith Wegman	Aicom LLC	Rt. 33 W. Buckhannon WV.	470-8890 Fax 470-8847
✓ Kevin Rfer	March-Westvir Co.	360 Frontier St. Morgantown WV 26509	304 599 4880
✓ Steve Langan	Langan G C Corp.	Rte 1 Box 84 Lumbard St. East, Wiley Ford, WV 26767	304-738-3300 304-738-3384 Fax
✓ Kevin Chambers	NDC Builders	340 MAUSFIELD AVE Pittsburg PA 15220	412-919-423 FAX 412-919-5933
✓ Robert Ayllson	B-N-A Hunt & Peeling LLC	RT 1 Box 500 Rowlesburg WV 26425	304-454-2085 FAX "same"
✓ KAREN BALL	Pierson Technical	302 Spruce St. St Albans, WV 25177	304-722-1810 304-722-1846 FAX
✓ Josh Wells	MASSARO	120 DELTA DRIVE Pgh PA 15238	412- 777 963-2800 Fax 963 2880
Mike Jenkins	Marcc	609 Broadway Bridgeport, WV 26330	304-842-5931 304-842-5125 Fax
Terry Sherman	RJA		
JAMES CARNEY	DVAL c/m	P.O. BOX 401 25322 CHARLESTON WV	304-347-8825



ms consultants, inc.
206 Capitol Street, 4th Floor
Charleston, WV 25301-2218

ms consultants, inc.
 206 Capitol Street
 Fourth Floor
 Charleston, WV 25301-2218

April 20, 2006

ADDENDUM NO. 01

To the Plans and Specifications for:

**Rubenstein Center for Youth
 Building Construction Package
 Davis, West Virginia
 Architect's Project No. 64-12545-00-II-I0-0312**

TO ALL BIDDERS:

This Addendum supplements and amends the original drawings and specifications and shall be taken into account in preparing proposals, and shall become a part of the contract documents. Bidders are cautioned to read all parts of this Addendum.

This Addendum consists of FOURTY SIX (46) pages, including attachments and this page.

A. DRAWINGS

AD1-1 Refer to Sheet C-8.0 - Site Utility Plan:

REVISE the UTILITIES CONTACTS - Gas Contact to read:

"Canaan Valley Gas Company
 HC70 Box 470
 Davis West Virginia 26260
 304-866-4872"

AD1-2 Refer to Sheet A-7.0.0 - Interior Elevations:

REVISE the following to Detail 11 East Elevation.

"Revise the two center wall cabinets to be wall mounted 36 inches wide by 30 inches high Mail Cubicles without doors with 27 fixed compartments each."

AD1-3 Refer to Sheet A-7.0.0 - Interior Elevations:

REVISE the following to Detail 17 South Elevation.

"Revise the center wall cabinet to be wall mounted 36 inches wide by 30 inches high Mail Cubicles without doors with 27 fixed compartments."

AD1-4 Refer to Sheet S1.a.1F - Foundation Plan Cottages A & B:

ADD notes to show where the foundations for the connector canopies are to be located. Refer to attached sheets SR-1, 2, and 3.

AD1-5 Refer to Sheets S1.a.1F - Foundation Plan Cottages A & B, S1.c.1F - Foundation Plan Cottage C, S1.e.1F - Foundation Plan Education and S1.j.1F - Foundation Plan Recreational/Dining:

ADD note regarding precast concrete connections. Refer to attached sheet SR-3.

- AD1-6 Refer to Sheets S1.a.1F - Foundation Plan Cottages A & B, S1.c.1F - Foundation Plan Cottage C, S1.d.1F - Foundation Plan Administration, S1.e.1F - Foundation Plan Education, S1.f.1F - Foundation Plan Vocational Buildings, and S1.j.1F - Foundation Plan Recreational/Dining:
REVISE detail reference for exterior housekeeping pad. Refer to attached sheet SR-4.
- AD1-7 Refer to Sheet S1.d.1F - Foundation Plan Administration:
ADD detail references. Refer to attached sheets SR-5, 6, 7, and 8.
- AD1-8 Refer to Sheet S1.e.1F - Foundation Plan Education:
ADD detail references. Refer to attached sheets SR-9, 10, and 11.
- AD1-9 Refer to Sheet S1.f.1F - Foundation Plan Vocational Buildings:
ADD detail references. Refer to attached sheets SR-12, and 13.
- AD1-10 Refer to Sheet S1.j.1F - Foundation Plan Recreational/Dining:
REVISED & ADD detail references. Refer to attached sheets SR-14, and 15.
- AD1-11 Refer to Sheet S1.k.1F - Foundation Plan Maintenance & Wellness Alternate:
REVISED & ADD detail references. Refer to attached sheets SR-16, and 17.
- AD1-12 Refer to Sheet S2.a.1R - Roof Framing Plan Cottages A & B, S2.c.1R - Roof Framing Plan Cottage C, S2.d.1R - Roof Framing Plan Administration, S2.e.1R - Roof Framing Plan Education, S2.f.1R - Roof Framing Plan Vocational Buildings, S2.j.1R - Roof Framing Plan Recreational/Dining, and S2.k.1R - Roof Framing Plan Maintenance:
ADD notes regarding framing details and roof truss profiles. Refer to attached sheet SR-18. (S2.k.1R has only notes regarding framing details).
- AD1-13 Refer to Sheet S2.a.1R - Roof Framing Plan Cottages A & B :
ADD detail reference and extended B-a3 beams to pass under triple roof truss. Refer to attached sheet SR-19.
- AD1-14 Refer to Sheets S2.a.1R - Roof Framing Plan Cottages A & B, and S2.d.1R - Roof Framing Plan Administration:
ADD expansion joints at the walkways. Refer to attached sheets SR-20, 21, 22, and 23.
- AD1-15 Refer to Sheet S2.d.1R - Roof Framing Plan Administration:
ADD detail reference. Refer to attached sheet SR-24.
- AD1-16 Refer to Sheet S2.j.1R - Roof Framing Plan Recreational/Dining:
ADD expansion joint and note regarding roof truss design and basketball goal. Refer to attached sheets SR-25, and 26.
- AD1-17 Refer to Sheet S2.j.1R - Roof Framing Plan Recreational/Dining:
ADD details 11 and 12. Refer to attached sheets SR-32, and 33.
- AD1-18 Refer to Sheet S3.0.0 - Structural Foundation Details:
REVISED detail 4. Refer to attached sheet SR-27.
- AD1-19 Refer to Sheet S3.1.0 - Miscellaneous Structural Details:
REVISED detail 2 and **ADD** details 3, 4, and 5. Refer to attached sheets SR-28, 29, 30, and 31.

AD1-20 Refer to ALL Fire Protection Sheets:

REVISE the Coded Note 2 to read:

- “2. Provide Tamper and Flow Switches and Coordinate with fire alarm system. See Detail B/P-1.0 for installation arrangement. See detail a/P5.0 for installation arrangement.”

AD1-21 Refer to Sheet P2.a.1D - Drain Waste and Vent Plan Cottages A/B:

ADD clothes washer wall box (watts 2M2-DWB or approved equal) in room a115 and connect to sanitary service.

ADD Floor Drain Below Backflow preventer in room a117 and connect to sanitary service with 3” pipe. This shall be done for all buildings.

AD1-22 Refer to Sheet P2.a.1W - Water Supply Plan Cottages A/B:

REVISE HW and CW shower supply pipes shall be connected to shower from chase in rooms a101 and a126.

REVISE all hot water return pipe to be 1/2” in diameter.

REVISE hot water supply piping. See attached sketch.

AD1-23 Refer to ALL Waste and Vent Risor Diagram Sheets:

REVISE plumbing fixture tags to match plumbing fixture tags located on Waste and Vent Floor Plans.

AD1-24 Refer to Sheet P3.a.1 - Waste and Vent Riser Diagram Cottages A/B:

DELETE Vent Through Roof located in center of building.

REVISE Office area plumbing vent system to connect to bathroom vent system located in room a126. Layout shall match sheet P2a.1D.

AD1-25 Refer to Sheet P4.a.1 - Gas Piping Plan Cottages A/B:

ADD Gas Pipe Connection Detail B/P4.a.1. See attached Sketch.

AD1-26 Refer to Sheet FP2.c.1 - Fire Protection Plan Cottage C:

ADD Coded Note 1 to rooms c125 and c134 closet.

AD1-27 Refer to Sheet E-1.0.1 - Electrical Site Plan:

ADD the following to the above referenced sheet.

“Add 4 in the ground light fixtures to light the 2 flagpoles. Each flag pole is to have 2 in ground light fixtures one in front (parking lot side) and one in the rear (building side).

The fixtures are to be a Lumiere, Monaco 6002A, 175 watt par38 spot light medium base, Bronze in color or approved equal.

Provide 3-#12 wires in a 3/4 inch conduit from the Panel D1-20 located in room d127. Run circuit D1-20 through the time clock contact. Provide 4 more 40 amp contacts to the time clock detail on E-6.0.1.

Refer to C-6.0 for exact locations. The light fixtures are to be 3 feet from the pole and aimed at the top of the pole.”

AD1-28 Refer to Sheet E-1.0.1 - Electrical Site Plan:

REVISE the following to the above referenced sheet.

“The 2 light poles located between buildings F and G, and H and J on the garage door side are to be shifted to be on to the grass areas to the right.

The pole between F and G is to shift 5 feet to the right and the pole between H and J is to shift 10 feet to the right.

Coordinate the location with the water line and the storm sewer.”

AD1-29 Refer to Sheet E-1.0.1 - Electrical Site Plan:

ADD the following to the above referenced sheet.

“Add to the canopies over the walk way between Buildings A and B (approximately 34 foot canopy) and D and A (approximately 42 foot canopy) the following. Provide centered and evenly spaced (3)-J light fixtures for the canopy between Buildings D and A use circuit A4-7 for power and control. Provide centered and evenly spaces (2)-J light fixtures for the canopy between Buildings A and B use circuit B4-7 for power and control. Wire to be 3-#12 in 3/4 concealed conduit and light fixtures are to be recessed.”

AD1-30 Refer to Sheet E-2.d.1P - Administration Building Power & Communications Plan:

REVISE the following to the above referenced sheet.

“Provide a circuit from panel D6-24 for the transformer for the automatic flush valves in the medical holding cells d102 and d103. Provide 3-#12 wires in a 3/4 inch conduit from the panel in room d127 to the transformer located in the chase between the cells. Provide disconnect as required.”

AD1-31 Refer to Sheet E-2.d.1P - Administration Building Power & Communications Plan:

REVISE the following to the above referenced sheet.

“Door D140A of Vestibule d140 is to be provided with an electric door strike, speaker and a door buzzer. The speaker and door buzzer are to run to room d143. Contractor shall run the power from D6-25. The speaker wire and buzzer wire are to be run in separate 3/4” conduits provided by the Contractor. The wire shall be specified by the manufacturer and installed by the Contractor. For bidding purposes run 4-#12 for the buzzer and 7-#12 for the speaker system.

Door D111B of Vestibule d111 is to be provided with an electric door strike, speaker and a door buzzer. They are to run to room d143 also. The speaker wire and buzzer wire are to be run in separate 3/4” conduits by the Contractor. The wire is to be specified by the manufacturer and installed by the Contractor. For bidding purposes run 4-#12 for each buzzer and 7-#12 for each speaker system.”

AD1-32 Refer to Sheet E-4.0.2P - Wire & Conduit Schedules:

ADD the following to the above referenced sheet.

“Add to the wire and conduit the following lighting branch feeds:

275 ext lights bld A 480v 2 pole 20amp/2pole 3-#10 in 1.25 inch conduit. Circuit A1-15,17

276 ext lights bld B 480v 2 pole 20amp/2pole 3-#10 in 1.25 inch conduit. Circuit B1-15,17

277 ext lights bld C 480v 2 pole 20amp/2pole 3-#10 in 1.25 inch conduit. Circuit C1-19,21

- 278 ext lights bld D 480v 2 pole 30amp/2pole 3-#10 in 1.25 inch conduit. Circuit D1-20,22
- 279 ext lights bld K 480v 2 pole 20amp/2pole 3-#10 in 1.25 inch conduit. Circuit K1-28,30
- 280 ext lights bld K 480v 2 pole 20amp/2pole 3-#10 in 1.25 inch conduit. Circuit K1-40,42"

AD1-33 Refer to Sheet E-4.0.3P - Panel Schedules:
REVISE the following to the above referenced sheet.
 "Provide all panel spaces shown for all panels with 20/1pole spare breakers."

AD1-34 Refer to Sheet E-5.0.1F:
ADD smoke detector in each electric room of each building. Provide smoke detectors in each corridor 12 foot on center for each building, except the vocational building. Provide vandal proof smoke detectors in each sleeping room. Provide smoke detectors in each one sleeping area 12 foot on center.

B. PROJECT MANUAL

AD1-35 Refer to Specification Section 03450 - Plant-Precast Architectural Concrete:

ADD the following acceptable manufacturers to paragraph 2.1.A:

- "2. High Concrete Group
 High Concrete Technology
 95 Mound Park Drive
 Springboro, Ohio 45066
 937-748-2412

- 3. The Shocky Precast Group
 Corporate Headquarters
 219 Stine Lane
 Winchester, Va 22603
 540-667-7700"

AD1-36 Refer to Specification Section 07226 - Vented-Nailboard Insulation System:

ADD the attached Specification Section 07226 in its entirety to the Project Manual.

AD1-37 Refer to Specification Section 08710 - Door Hardware:

ADD item number 10 to 2.1.A:

- "10. Electric Strike: HES, inc., Phoenix, Arizona
 - a. 9600 series, 4.5 amps @ 12VDC, Tamper resistant - heavy duty construction, 5 year warranty, with 2006P plug in buzzer."

AD1-38 Refer to Specification Section 08710 - Door Hardware:

ADD the following to 3.6.A Hardware Set 05:

- "1ea. Electric Strike 9600 series 630 hes (Doors D140A & D111A only)"

AD1-39 Refer to Specification Section 08710 - Door Hardware:

ADD the following to 3.6.A Hardware Set 07:

“1ea. Electric Strike 9600 series 630 hes (Door D111B only)”

AD1-40 Refer to Specification Section 09686 - Sheet Carpet:

DELETE Section entirely.

AD1-41 Refer to Specification Section 09900 - Paints and Coatings:

REVISE paragraph 2.2.C. to read:

“C. Colors: As selected by Architect from manufacturer’s full range. Contractor shall provide a minimum of one individual wall per room with an accent color of paint, as directed by the Architect.”

AD1-42 Refer to Specification Section 15410 - Plumbing Fixtures:

REVISE 2.3 D Mastertrol electronic water management system to “MVC2 valve controller and MVCFV for flush control”.

ATTACHMENTS:

Drawings:

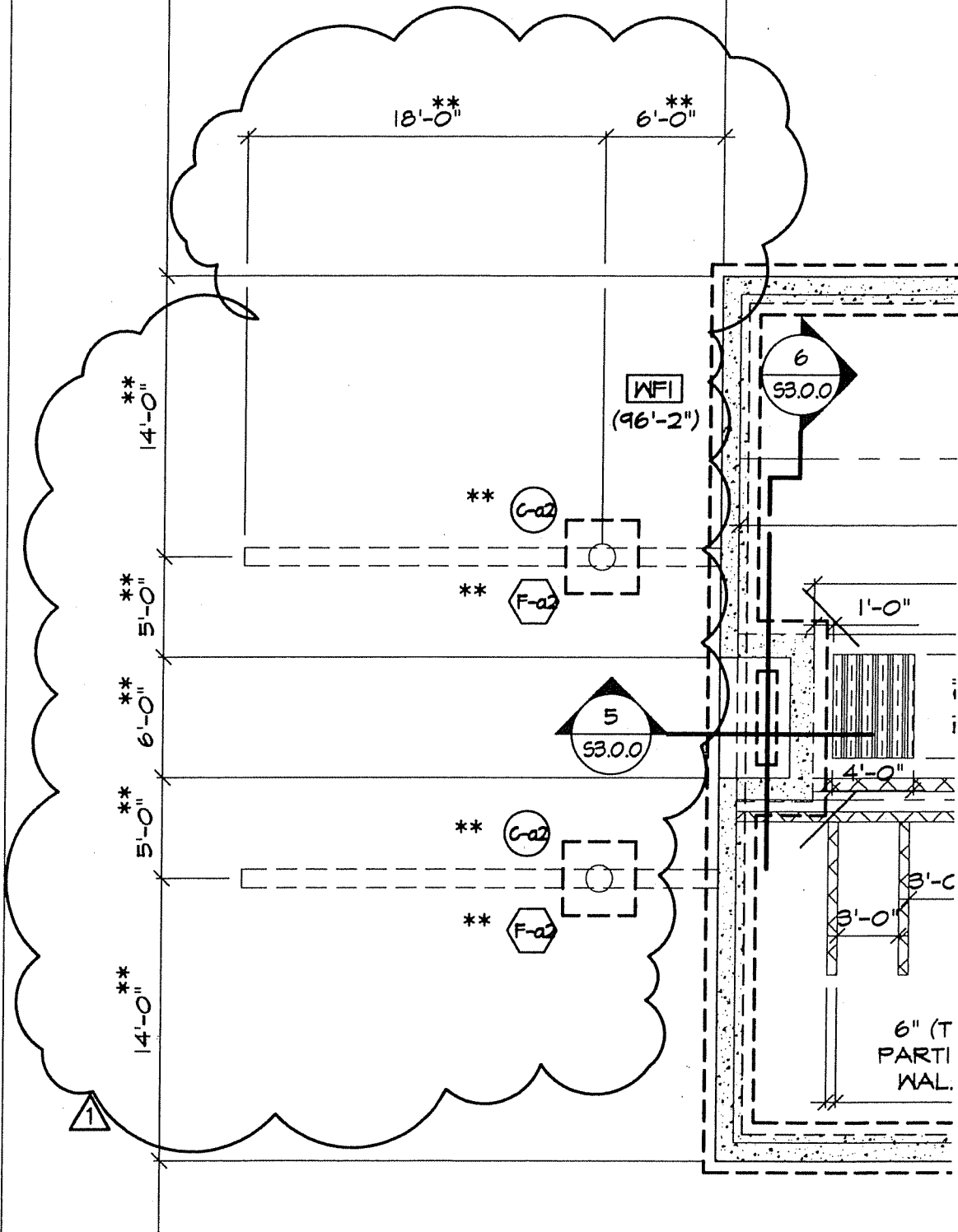
SR-1	Reference Drawing S1.a.1F	1 sheet 8.5"x11"
SR-2	Reference Drawing S1.a.1F	1 sheet 8.5"x11"
SR-3	Reference Drawing S1.a.1F	1 sheet 8.5"x11"
SR-4	Reference Drawing S1.a.1F	1 sheet 8.5"x11"
SR-5	Reference Drawing S1.d.1F	1 sheet 8.5"x11"
SR-6	Reference Drawing S1.d.1F	1 sheet 8.5"x11"
SR-7	Reference Drawing S1.d.1F	1 sheet 8.5"x11"
SR-8	Reference Drawing S1.d.1F	1 sheet 8.5"x11"
SR-9	Reference Drawing S1.e.1F	1 sheet 8.5"x11"
SR-10	Reference Drawing S1.e.1F	1 sheet 8.5"x11"
SR-11	Reference Drawing S1.e.1F	1 sheet 8.5"x11"
SR-12	Reference Drawing S1.f.1F	1 sheet 8.5"x11"
SR-13	Reference Drawing S1.f.1F	1 sheet 8.5"x11"
SR-14	Reference Drawing S1.j.1F	1 sheet 8.5"x11"
SR-15	Reference Drawing S1.j.1F	1 sheet 8.5"x11"
SR-16	Reference Drawing S1.k.1F	1 sheet 8.5"x11"
SR-17	Reference Drawing S1.k.1F	1 sheet 8.5"x11"
SR-18	Reference Drawing S2.c.1R	1 sheet 8.5"x11"
SR-19	Reference Drawing S2.a.1R	1 sheet 8.5"x11"
SR-20	Reference Drawing S2.a.1R	1 sheet 8.5"x11"
SR-21	Reference Drawing S2.a.1R	1 sheet 8.5"x11"
SR-22	Reference Drawing S2.a.1R	1 sheet 8.5"x11"
SR-23	Reference Drawing S2.d.1R	1 sheet 8.5"x11"
SR-24	Reference Drawing S2.d.1R	1 sheet 8.5"x11"
SR-25	Reference Drawing S2.j.1R	1 sheet 8.5"x11"
SR-26	Reference Drawing S2.j.1R	1 sheet 8.5"x11"
SR-27	Reference Drawing S3.0.0	1 sheet 8.5"x11"
SR-28	Reference Drawing S3.1.0	1 sheet 8.5"x11"
SR-29	Reference Drawing S3.1.0	1 sheet 8.5"x11"
SR-30	Reference Drawing S3.1.0	1 sheet 8.5"x11"
SR-31	Reference Drawing S3.1.0	1 sheet 8.5"x11"
SR-32	Reference Drawing S3.2.0	1 sheet 8.5"x11"
SR-33	Reference Drawing S3.2.0	1 sheet 8.5"x11"
PR-1	Reference Drawing P2.a.1	1 sheet 8.5"x11"
PR-2	Reference Drawing P4.a.1	1 sheet 8.5"x11"

Specifications Sections:

Section 07226 Vented-Nailboard Insulation System pages 1 through 4

END OF ADDENDUM

136'-11"



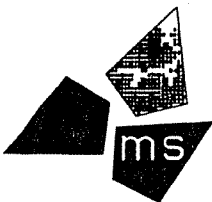
REFER SHEET S1.a.1F

JOB NAME:

RUBENSTEIN CENTER FOR YOUTH

DESCRIPTION:

ADDENDUM NO. 1 4/20/06



ms consultants, inc.
 engineers, architects, planners
 206 CAPITAL STREET, 4th FLOOR
 Charleston, West Virginia 25301
 (304) 346-1211 Fax : (304) 346-1213

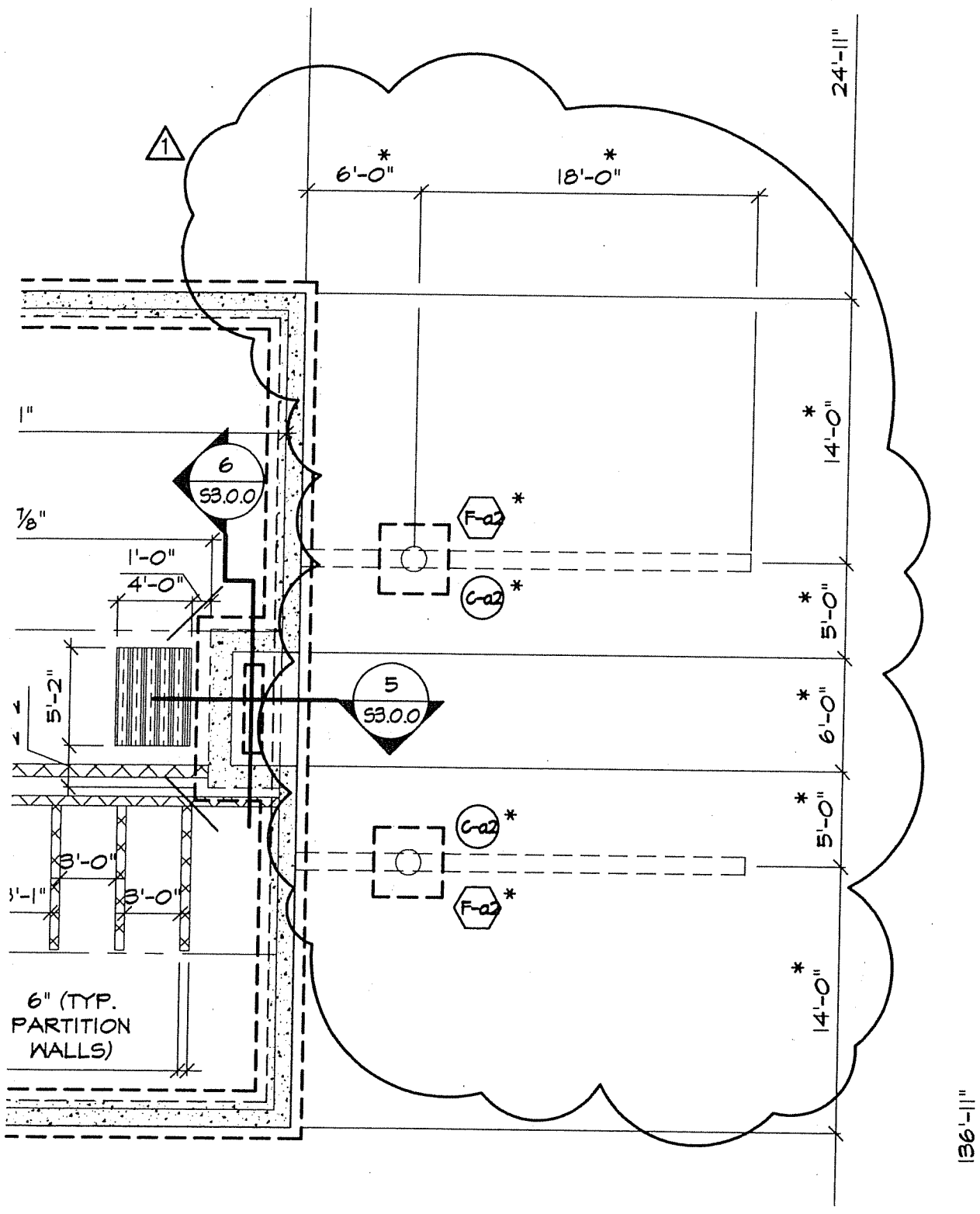
MS PROJECT NUMBER:

64-12545-00-II-13-0308

SCALE:

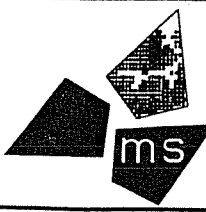
N.T.S.

SR-1



REFER SHEET S1.a.1F

JOB NAME: RUBENSTEIN CENTER FOR YOUTH	DESCRIPTION: ADDENDUM NO. 1 4/20/06
---	---



ms consultants, inc.
 engineers, architects, planners
 206 CAPITAL STREET, 4th FLOOR
 Charleston, West Virginia 25301
 (304) 346-1211 Fax : (304) 346-1213

MS PROJECT NUMBER: 64-12545-00-II-I3-0308	SR-2
SCALE: N.T.S.	


NOTES:

1. (-XX'-X") DENOTES TOP OF FOOTING ELEVATION RELATIVE TO FLOOR ELEV. (100'-0"). TOP OF FOOTING ELEVATION SHALL BE (96'-2") - EXTERIOR AND (99'-4") - INTERIOR U.N.O.
2. FLOOR ELEVATION @ 100'-0" (U.N.O.). SEE SITE PLANS FOR ACTUAL FINISHED FLOOR ELEVATION.
3. THICKENED SLAB SHALL BE CONSTRUCTED FOR INTERIOR CMU WALLS UNLESS DESIGNATED BY WFX : SEE DETAIL 9/53.0.0 U.N.O.
4. C.J. DENOTES SLAB CONTROL JOINT - SEE DET. 11/53.0.0.
5. SEE ARCH. PLANS FOR INTERIOR WALL DIMENSIONS.
6. SEE MECH. PLANS FOR ADDITIONAL INFORMATION REGARDING EQUIPMENT BEARING ON CONCRETE PADS, INCLUDING THE SIZE OF THE UNIT.

7. PRECAST WALLS AND CONNECTIONS TO FOUNDATION SHALL BE DESIGNED BY THE PRECAST MANUF. FOR HORIZONTAL SHEAR FORCES DUE TO WIND AND SEISMIC LOADS, INCLUDING OVERTURNING. 1

1
 * COTTAGE A ONLY
 ** COTTAGE A AND B

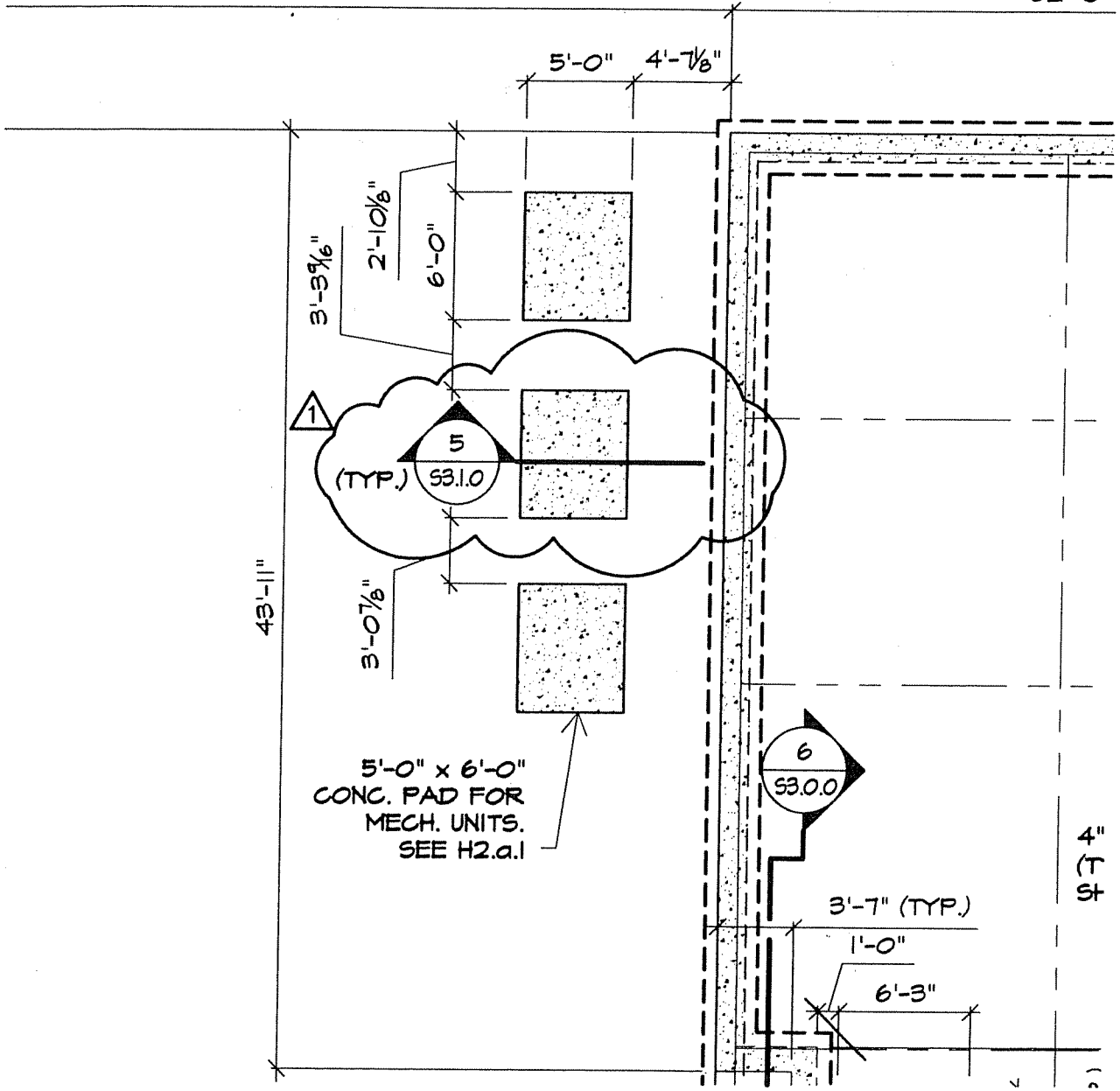
REFER SHEET S1.a.1F

JOB NAME: <p style="text-align: center; margin-top: 10px;">RUBENSTEIN CENTER FOR YOUTH</p>	DESCRIPTION: <p style="text-align: center; margin-top: 10px;">ADDENDUM NO. 1 4/20/06</p>			
 <div style="clear: both;"></div> <p>ms consultants, inc. engineers, architects, planners 206 CAPITAL STREET, 4th FLOOR Charleston, West Virginia 25301 (304) 346-1211 Fax : (304) 346-1213</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 70%; padding: 5px;"> MS PROJECT NUMBER: 64-12545-00-II-I3-0308 </td> <td rowspan="2" style="width: 30%; text-align: center; vertical-align: middle; font-size: 2em;"> SR-3 </td> </tr> <tr> <td style="padding: 5px;"> SCALE: <p style="text-align: center; margin-top: 10px;">N.T.S.</p> </td> </tr> </table>	MS PROJECT NUMBER: 64-12545-00-II-I3-0308	SR-3	SCALE: <p style="text-align: center; margin-top: 10px;">N.T.S.</p>
MS PROJECT NUMBER: 64-12545-00-II-I3-0308	SR-3			
SCALE: <p style="text-align: center; margin-top: 10px;">N.T.S.</p>				

143-10

56'-11"

32'-0"



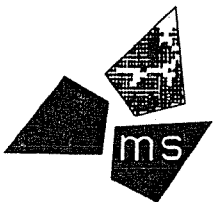
REFER SHEET S1.a.1F

JOB NAME:

RUBENSTEIN CENTER FOR YOUTH

DESCRIPTION:

ADDENDUM NO. 1 4/20/06



ms consultants, inc.
engineers, architects, planners

206 CAPITAL STREET, 4th FLOOR
Charleston, West Virginia 25301
(304) 346-1211 Fax : (304) 346-1213

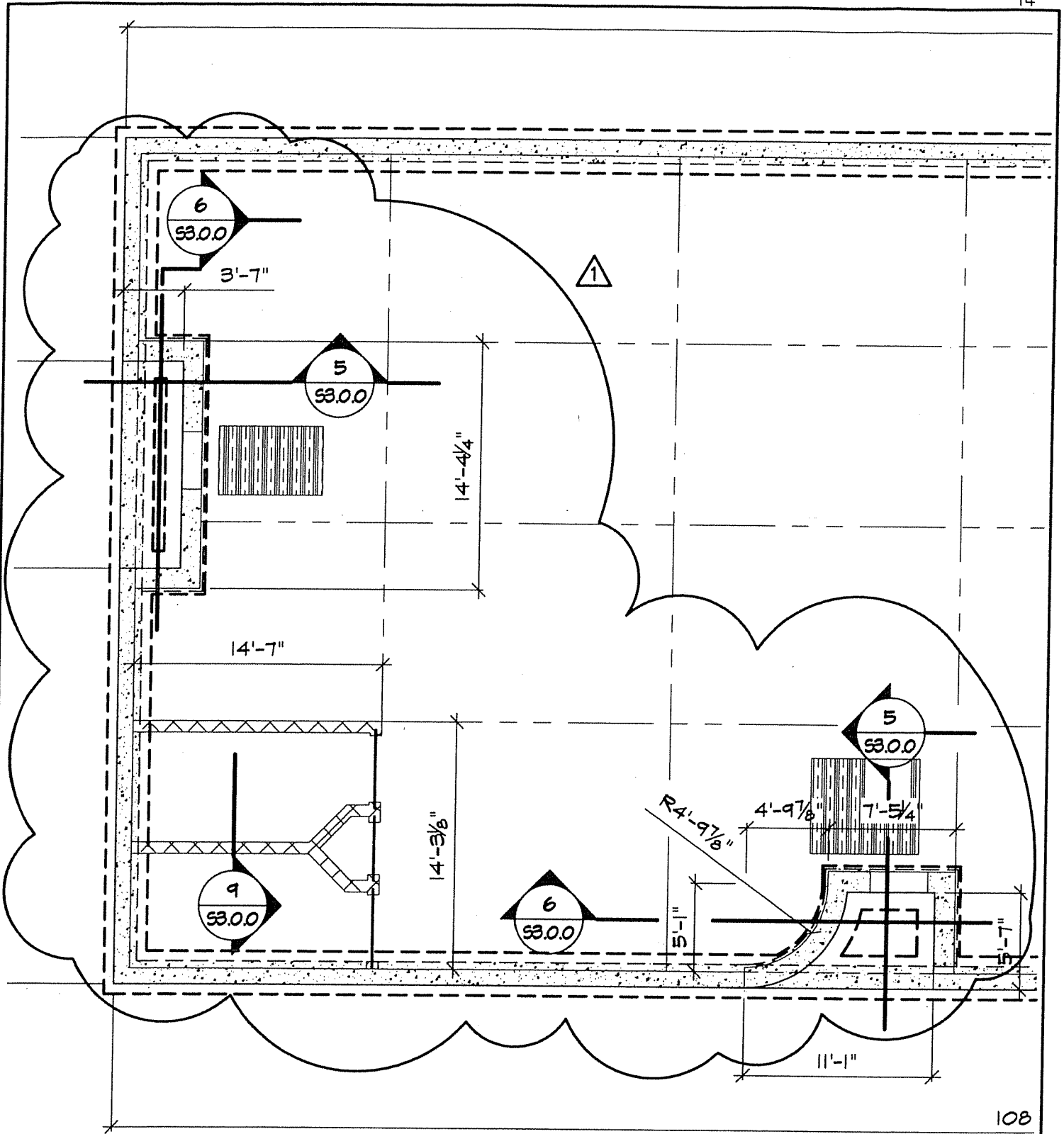
MS PROJECT NUMBER:

64-12545-00-II-13-0308

SCALE:

N.T.S.

SR-4



108

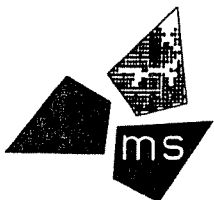
REFER SHEET S1.d.1F

JOB NAME:

RUBENSTEIN CENTER FOR YOUTH

DESCRIPTION:

ADDENDUM NO. 1 4/20/06



ms consultants, inc.
 engineers, architects, planners
 206 CAPITAL STREET, 4th FLOOR
 Charleston, West Virginia 25301
 (304) 346-1211 Fax : (304) 346-1213

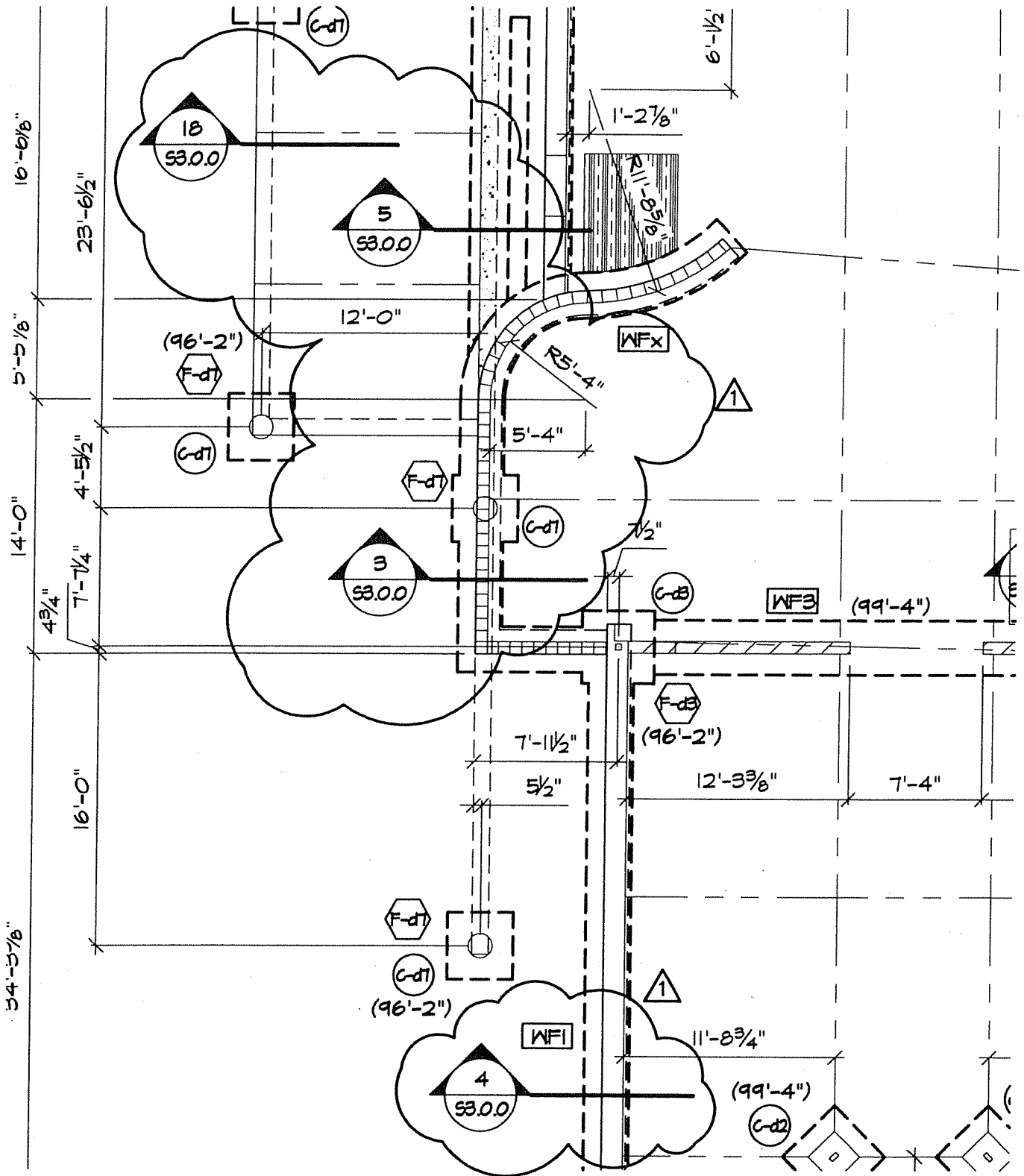
MS PROJECT NUMBER:

64-12545-00-11-13-0308

SCALE:

N.T.S.

SR-5



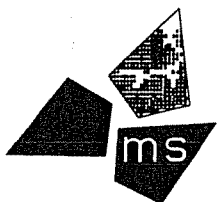
REFER SHEET S1.d.1F

JOB NAME:

RUBENSTEIN CENTER FOR YOUTH

DESCRIPTION:

ADDENDUM NO. 1 4/20/06



ms consultants, inc.
 engineers, architects, planners
 206 CAPITAL STREET, 4th FLOOR
 Charleston, West Virginia 25301
 (304) 346-1211 Fax : (304) 346-1213

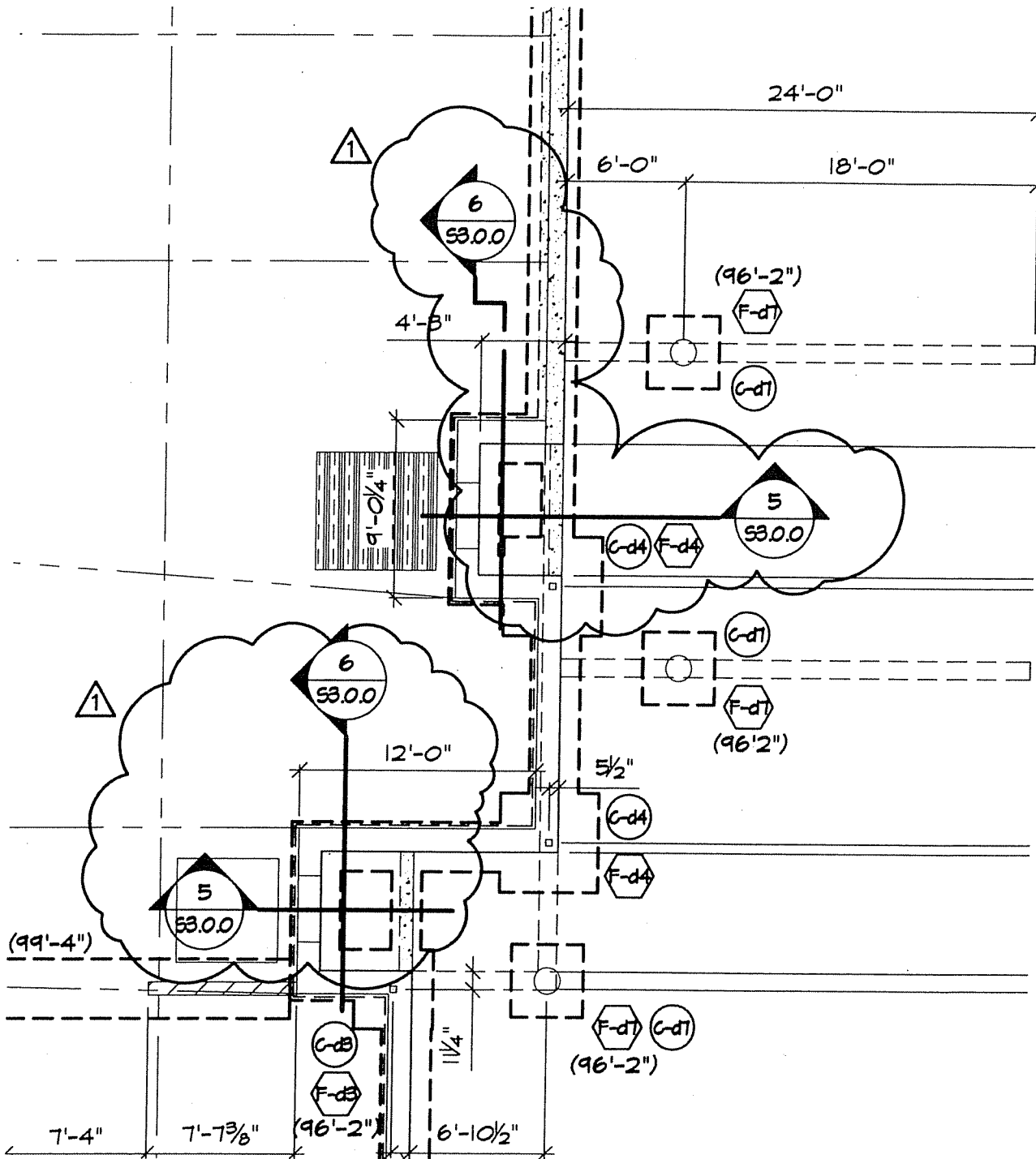
MS PROJECT NUMBER:

64-12545-00-II-13-0308

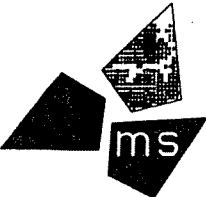
SCALE:

N.T.S.

SR-6



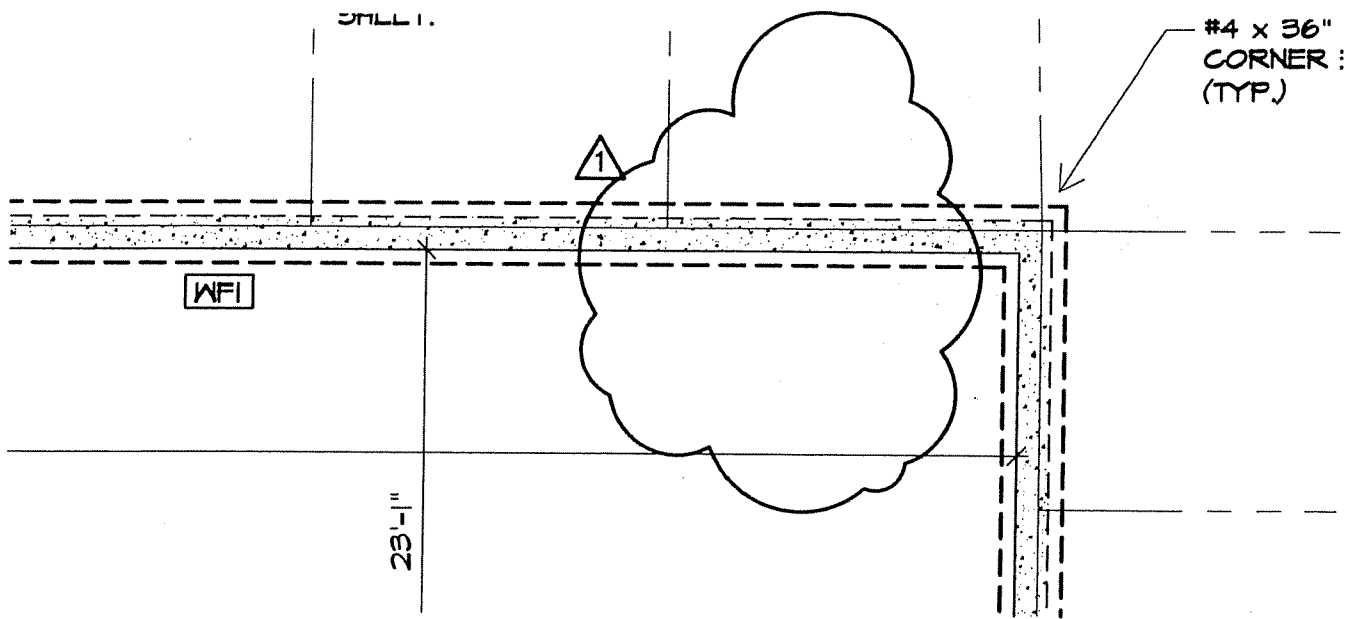
REFER SHEET S1.d.1F

JOB NAME: RUBENSTEIN CENTER FOR YOUTH		DESCRIPTION: ADDENDUM NO. 1 4/20/06	
 ms consultants, inc. engineers, architects, planners 206 CAPITAL STREET, 4th FLOOR Charleston, West Virginia 25301 (304) 346-1211 Fax : (304) 346-1213	MS PROJECT NUMBER: 64-12545-00-II-13-0308		SR-7
	SCALE: N.T.S.		

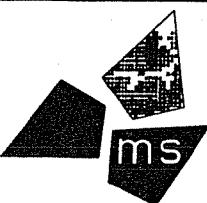
NOTES:

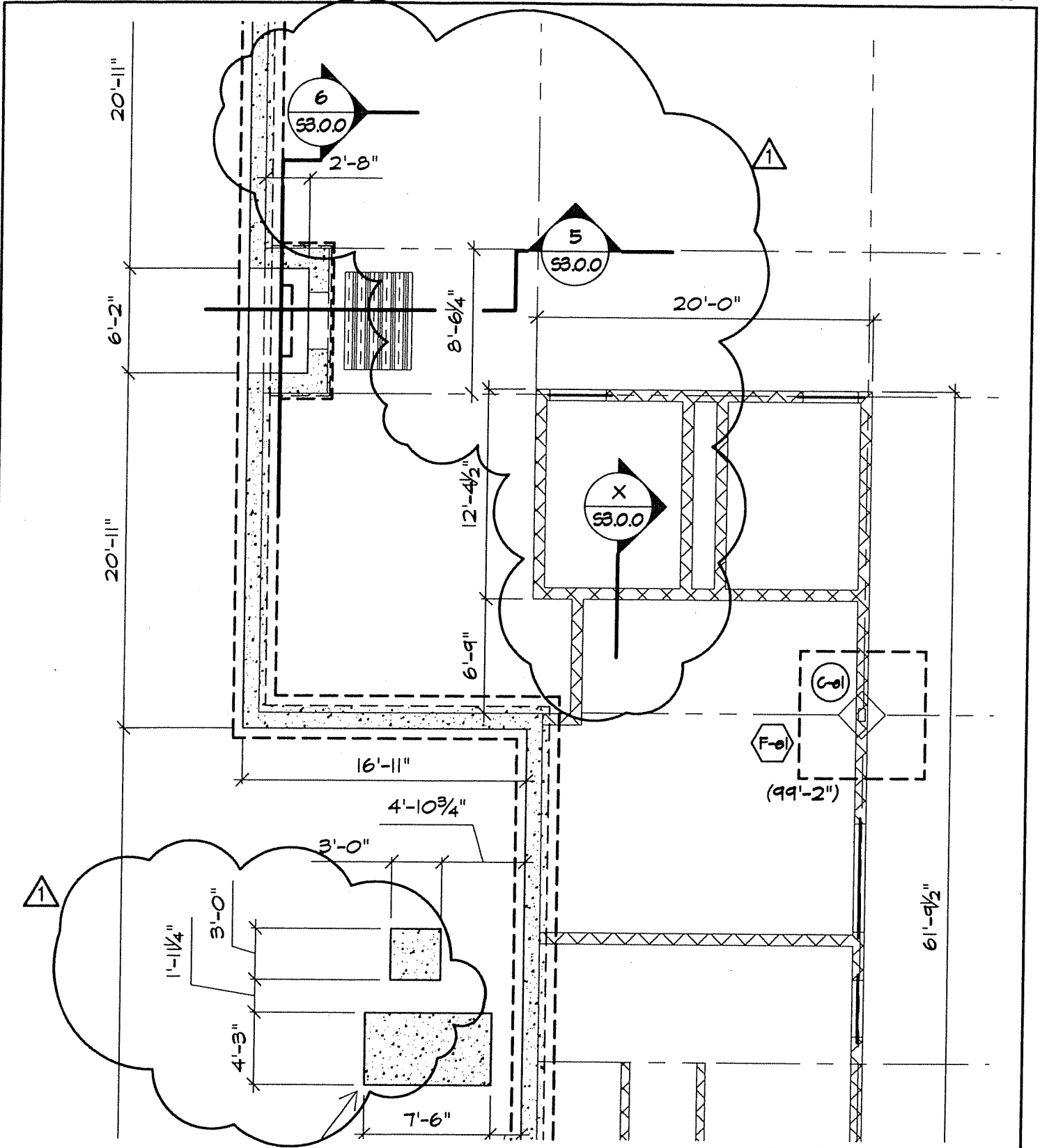
1. (-XX'-X") DENOTES TOP OF FOOTING ELEVATION RELATIVE TO FLOOR ELEV. (100'-0"). TOP OF FOOTING ELEVATION SHALL BE (96'-2") - EXTERIOR AND (99'-4") - INTERIOR U.N.O.
2. FLOOR ELEVATION @ 100'-0" (U.N.O.). SEE SITE PLANS FOR ACTUAL FINISHED FLOOR ELEVATION.
3. THICKENED SLAB SHALL BE CONSTRUCTED FOR INTERIOR CMU WALLS UNLESS DESIGNATED BY **WFI** : SEE DETAIL 9/S3.0.0 U.N.O.
4. C.J. DENOTES SLAB CONTROL JOINT - SEE DET. 11/S3.0.0.
5. SEE ARCH. PLANS FOR INTERIOR WALL DIMENSIONS.

1. PRECAST WALLS AND CONNECTIONS TO FOUNDATION SHALL BE DESIGNED BY THE PRECAST MANUF. FOR HORIZONTAL SHEAR FORCES DUE TO WIND AND SEISMIC LOADS, INCLUDING OVERTURNING.



REFER SHEET S1.d.1F

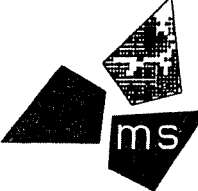
JOB NAME: RUBENSTEIN CENTER FOR YOUTH		DESCRIPTION: ADDENDUM NO. 1 4/20/06	
 ms consultants, inc. engineers, architects, planners 206 CAPITAL STREET, 4th FLOOR Charleston, West Virginia 25301 (304) 346-1211 Fax : (304) 346-1213	MS PROJECT NUMBER: 64-12545-00-II-I3-0308		SR-8
	SCALE: N.T.S.		



REFER SHEET S1.e.1F

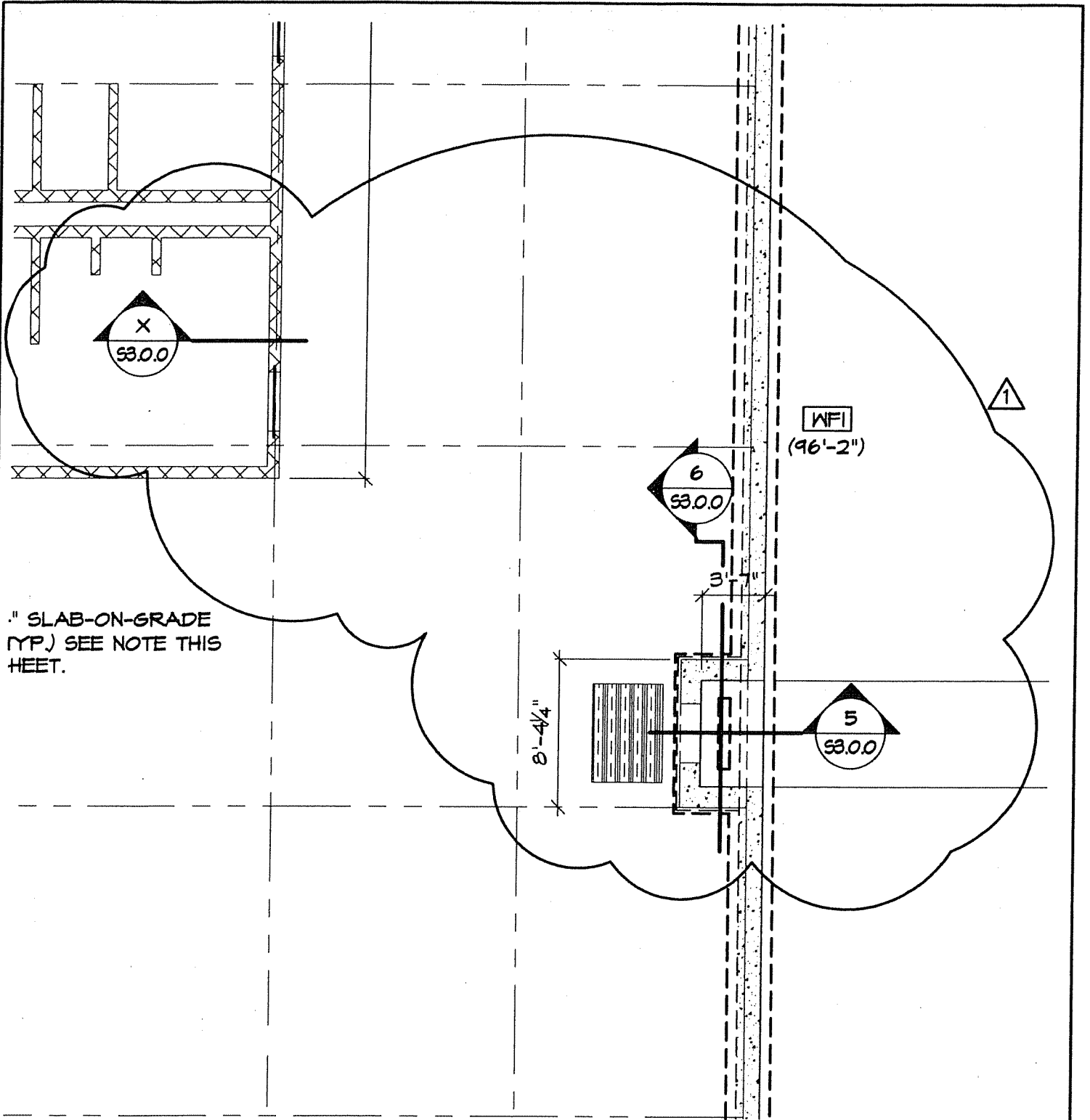
JOB NAME:
RUBENSTEIN CENTER FOR YOUTH

DESCRIPTION:
ADDENDUM NO. 1 4/20/06

 **ms consultants, inc.**
 engineers, architects, planners
 206 CAPITAL STREET, 4th FLOOR
 Charleston, West Virginia 25301
 (304) 346-1211 Fax : (304) 346-1213

MS PROJECT NUMBER:
 64-12545-00-11-13-0308
 SCALE:
N.T.S.

SR-9



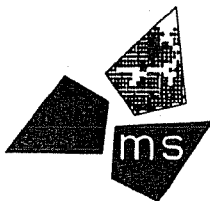
REFER SHEET S1.e.1F

JOB NAME:

RUBENSTEIN CENTER FOR YOUTH

DESCRIPTION:

ADDENDUM NO. 1 4/20/06



ms consultants, inc.
 engineers, architects, planners

206 CAPITAL STREET, 4th FLOOR
 Charleston, West Virginia 25301
 (304) 346-1211 Fax : (304) 346-1213

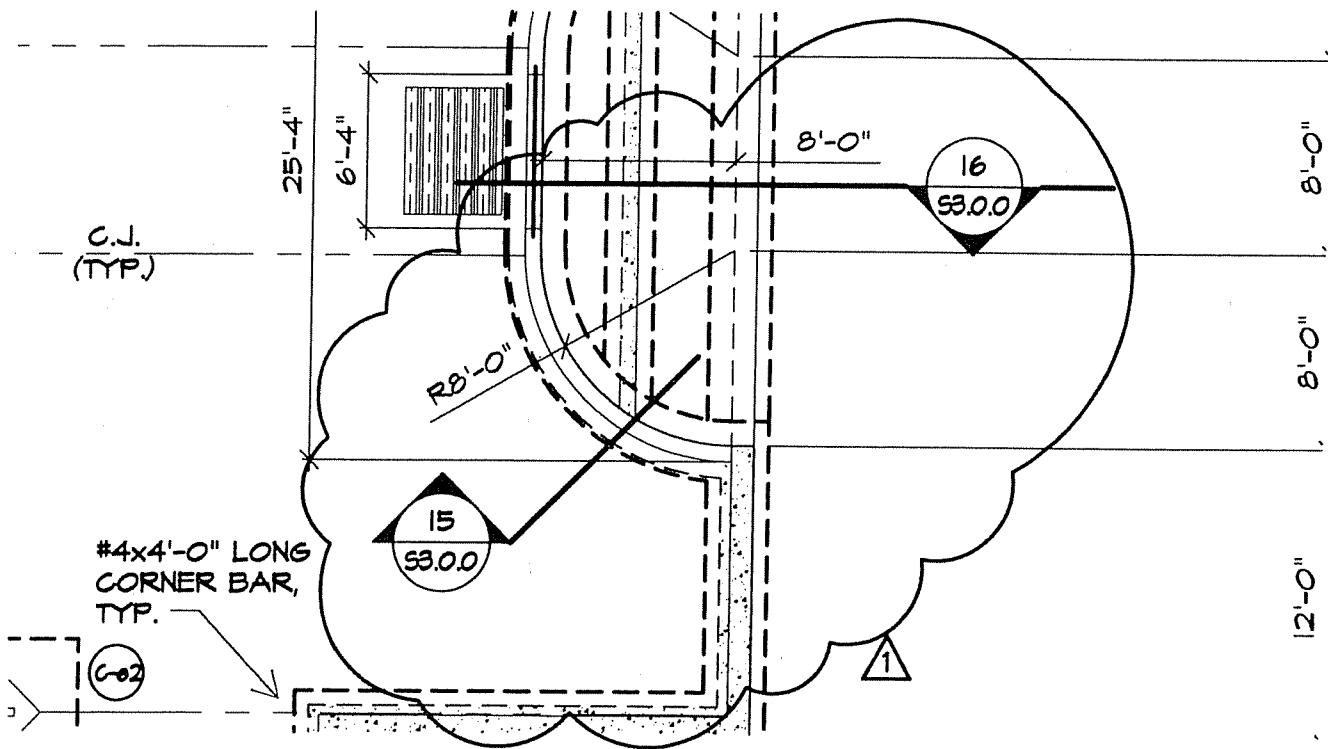
MS PROJECT NUMBER:

64-12545-00-II-I3-0308

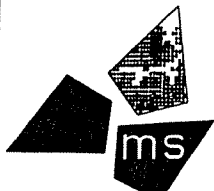
SCALE:

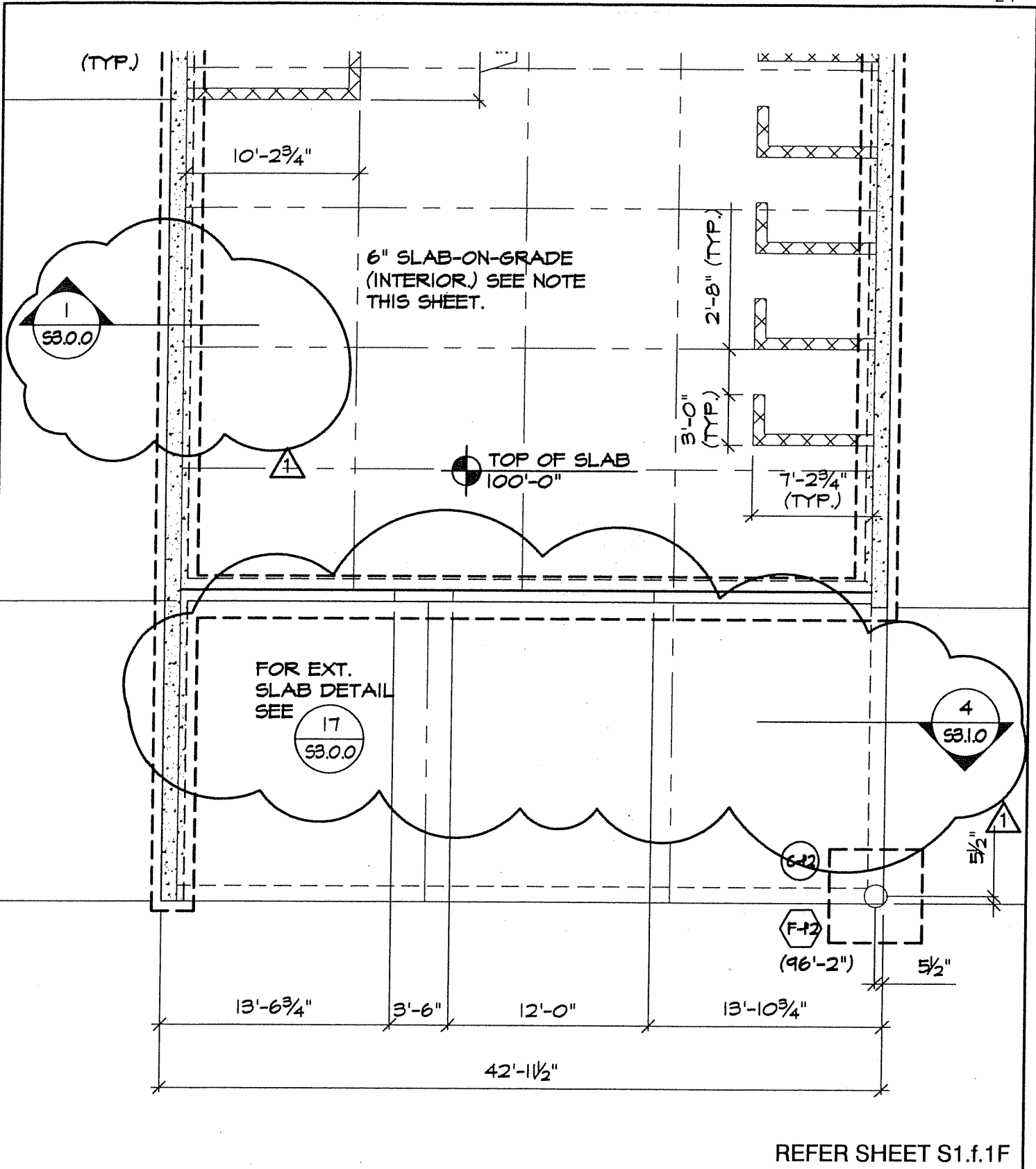
N.T.S.

SR-10



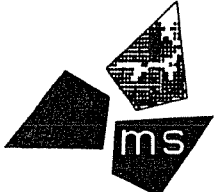
REFER SHEET S1.e.1F

JOB NAME: RUBENSTEIN CENTER FOR YOUTH		DESCRIPTION: ADDENDUM NO. 1 4/20/06	
 <p>ms consultants, inc. engineers, architects, planners 206 CAPITAL STREET, 4th FLOOR Charleston, West Virginia 25301 (304) 346-1211 Fax : (304) 346-1213</p>	MS PROJECT NUMBER: 64-12545-00-II-13-0308	SR-11	
	SCALE: N.T.S.		



JOB NAME:
RUBENSTEIN CENTER FOR YOUTH

DESCRIPTION:
ADDENDUM NO. 1 4/20/06

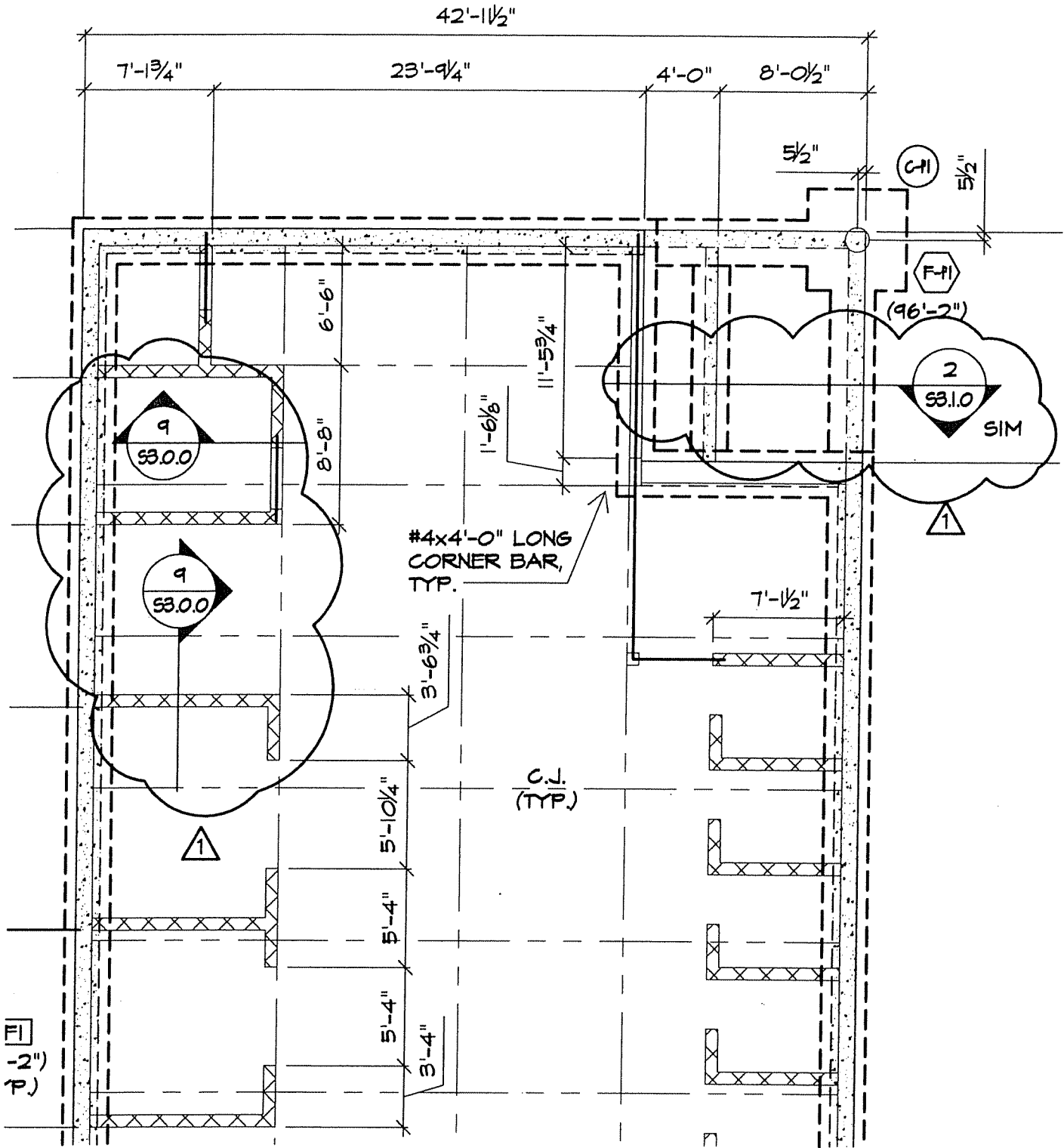


ms consultants, inc.
engineers, architects, planners
206 CAPITAL STREET, 4th FLOOR
Charleston, West Virginia 25301
(304) 346-1211 Fax : (304) 346-1213

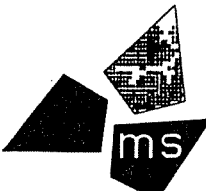
MS PROJECT NUMBER:
64-12545-00-II-I3-0308

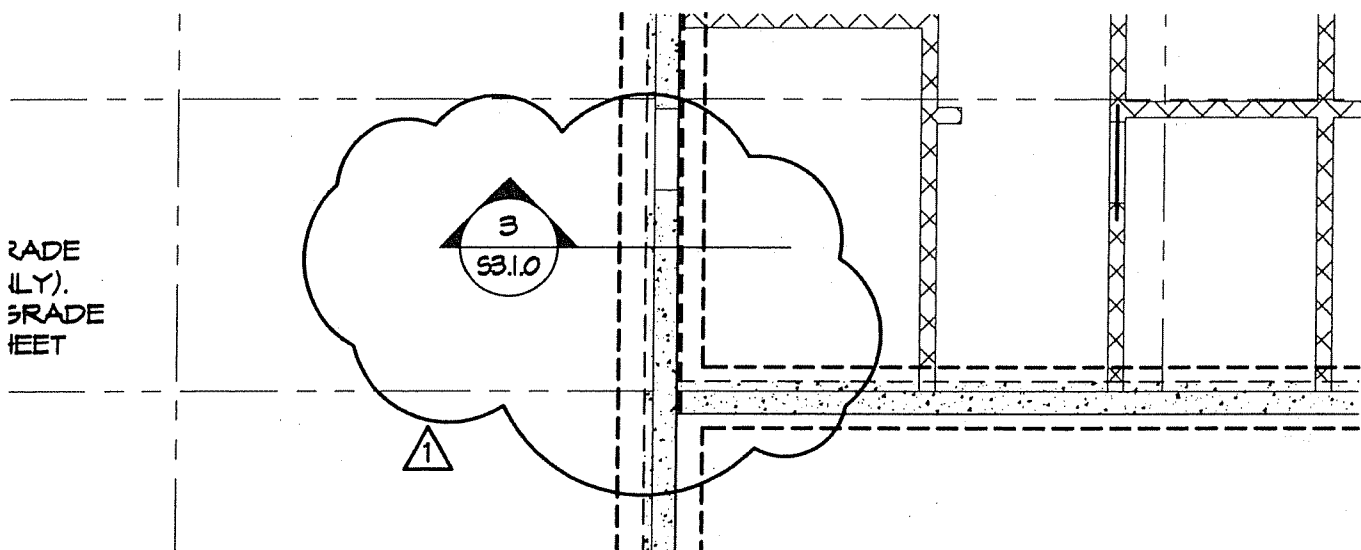
SCALE:
N.T.S.

SR-12



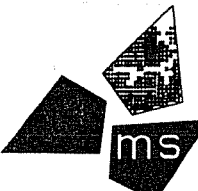
REFER SHEET S1.f.1F

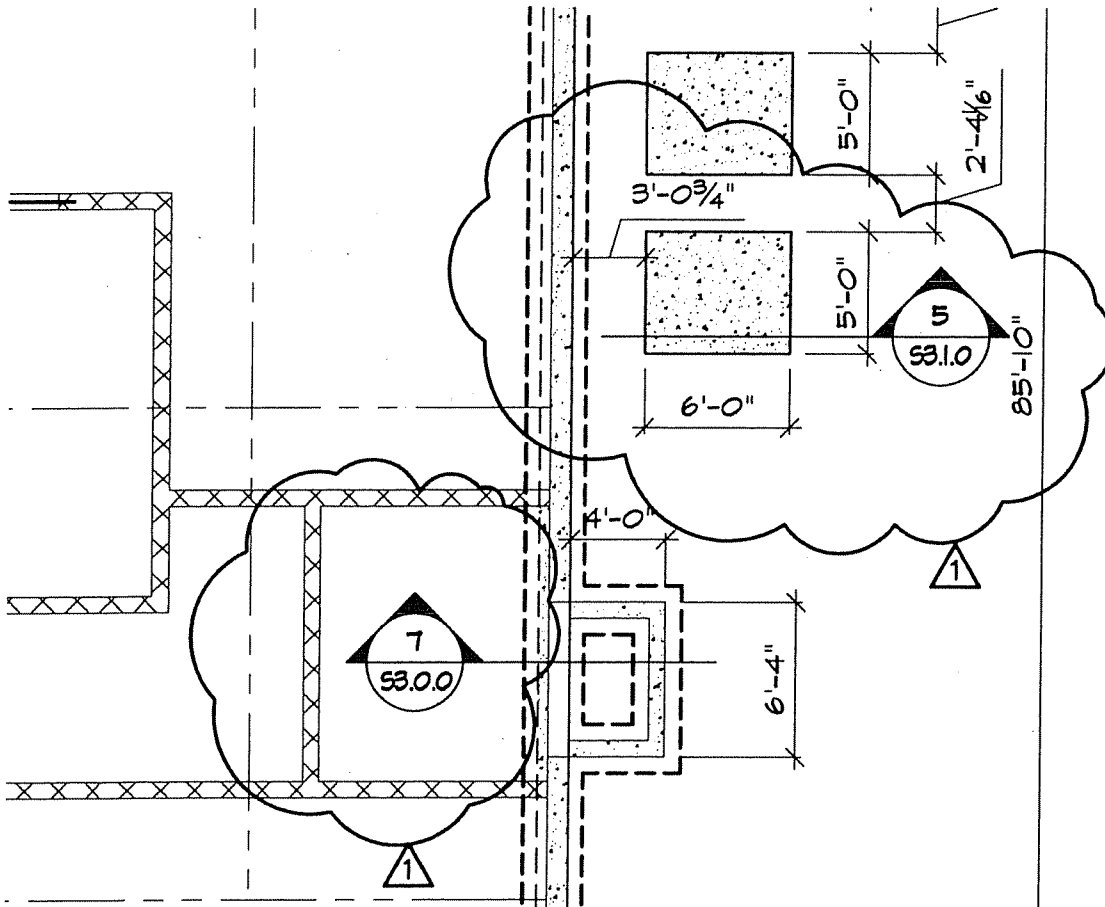
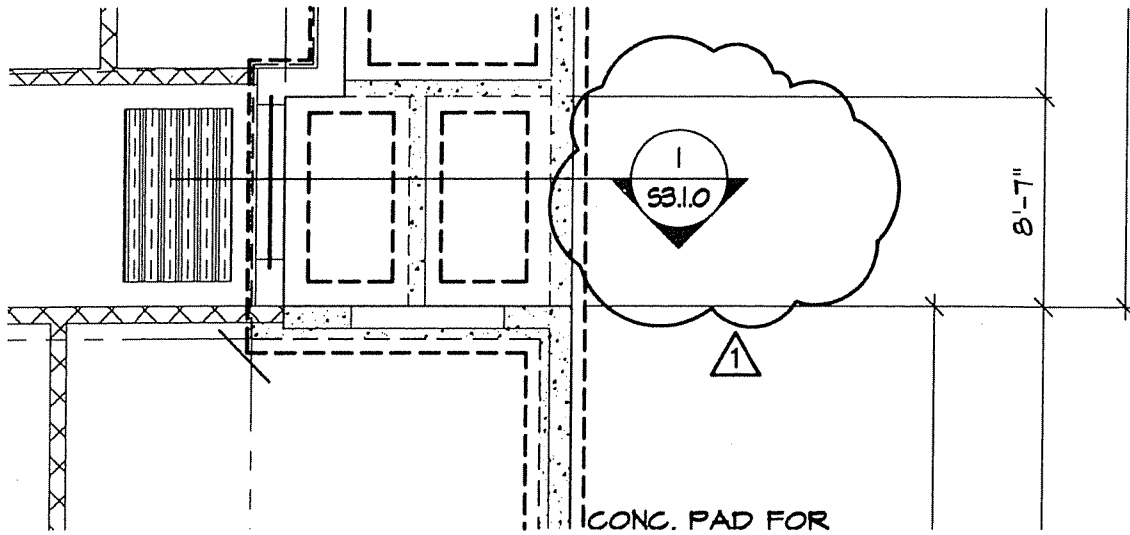
JOB NAME: RUBENSTEIN CENTER FOR YOUTH		DESCRIPTION: ADDENDUM NO. 1 4/20/06	
 ms consultants, inc. engineers, architects, planners 206 CAPITAL STREET, 4th FLOOR Charleston, West Virginia 25301 (304) 346-1211 Fax : (304) 346-1213	MS PROJECT NUMBER: 64-12545-00-II-13-0308		SR-13
	SCALE: N.T.S.		



GRADE
(LY).
GRADE
FEET

REFER SHEET S1.j.1F

JOB NAME: RUBENSTEIN CENTER FOR YOUTH		DESCRIPTION: ADDENDUM NO. 1 4/20/06	
 ms consultants, inc. engineers, architects, planners 206 CAPITAL STREET, 4th FLOOR Charleston, West Virginia 25301 (304) 346-1211 Fax : (304) 346-1213	MS PROJECT NUMBER: 64-12545-00-II-13-0308		SR-14
	SCALE: N.T.S.		



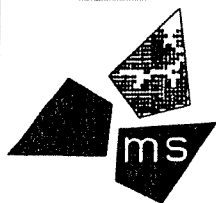
REFER SHEET S1.j.1F

JOB NAME:

RUBENSTEIN CENTER FOR YOUTH

DESCRIPTION:

ADDENDUM NO. 1 4/20/06



ms consultants, inc.
engineers, architects, planners

206 CAPITAL STREET, 4th FLOOR
Charleston, West Virginia 25301
(304) 346-1211 Fax : (304) 346-1213

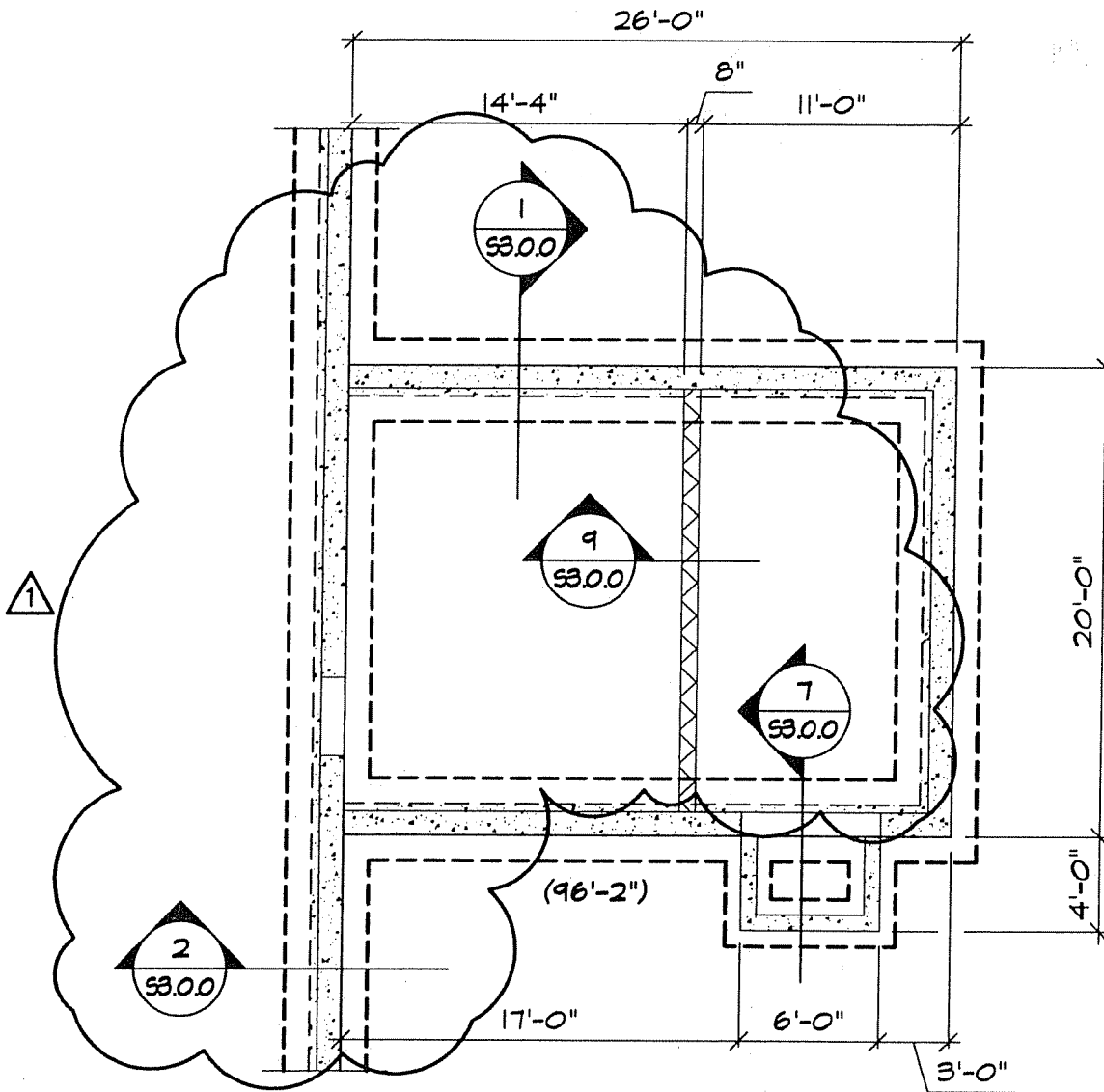
MS PROJECT NUMBER:

64-12545-00-II-I3-0308

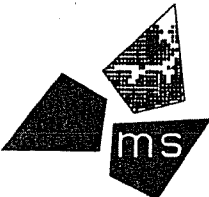
SCALE:

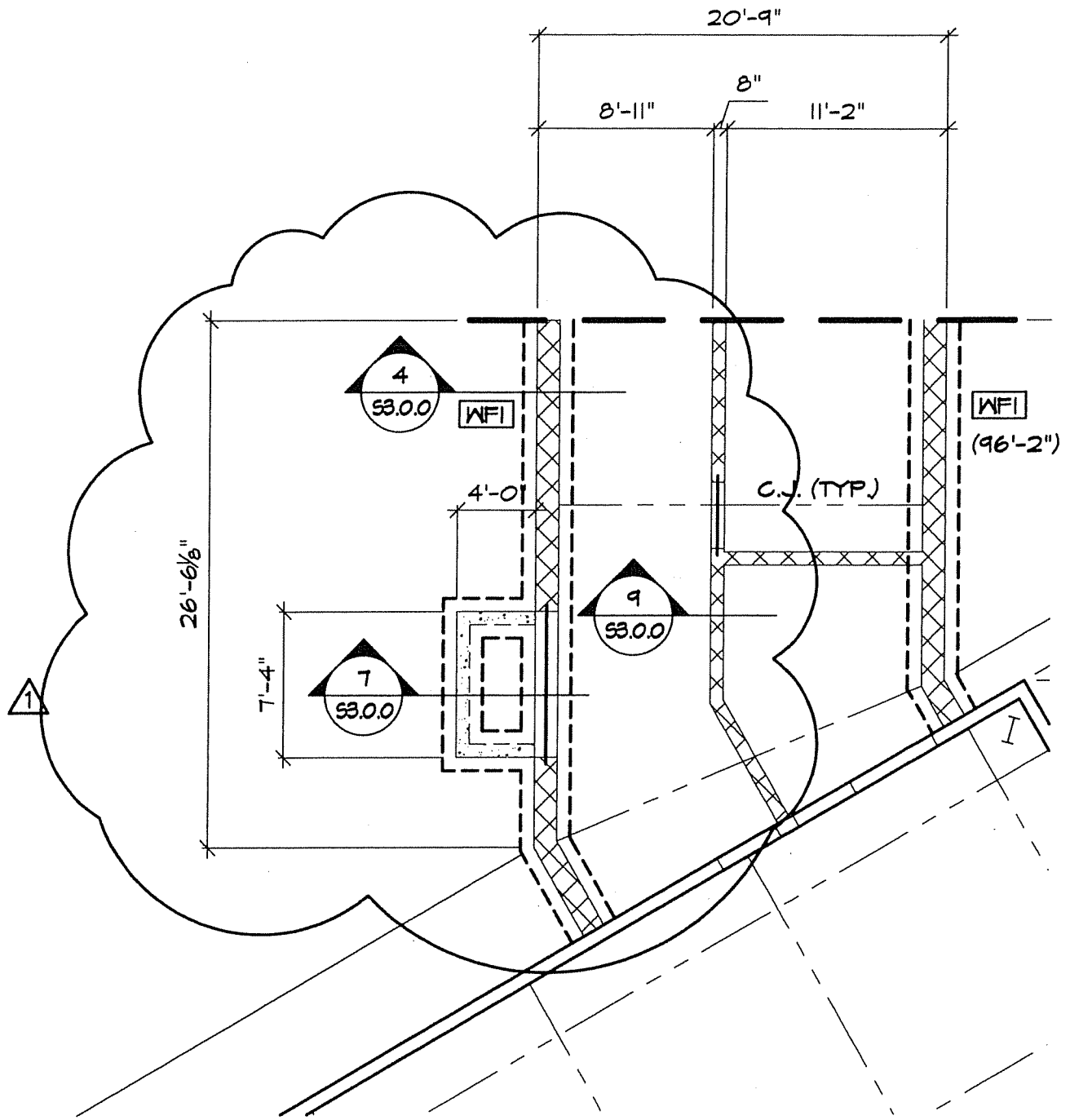
N.T.S.

SR-15



REFER SHEET S1.k.1F

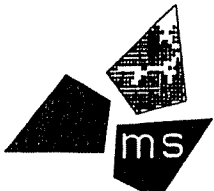
JOB NAME: RUBENSTEIN CENTER FOR YOUTH		DESCRIPTION: ADDENDUM NO. 1 4/20/06	
 ms consultants, inc. engineers, architects, planners 206 CAPITAL STREET, 4th FLOOR Charleston, West Virginia 25301 (304) 346-1211 Fax : (304) 346-1213	MS PROJECT NUMBER: 64-12545-00-II-I3-0308		SR-16
	SCALE: N.T.S.		



REFER SHEET S1.k.1F

JOB NAME:
RUBENSTEIN CENTER FOR YOUTH

DESCRIPTION:
ADDENDUM NO. 1 4/20/06


 **ms consultants, inc.**
 engineers, architects, planners
 206 CAPITAL STREET, 4th FLOOR
 Charleston, West Virginia 25301
 (304) 346-1211 Fax : (304) 346-1213

MS PROJECT NUMBER:
 64-12545-00-II-I3-0308
 SCALE:
 N.T.S.

SR-17

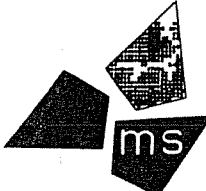
NOTES:

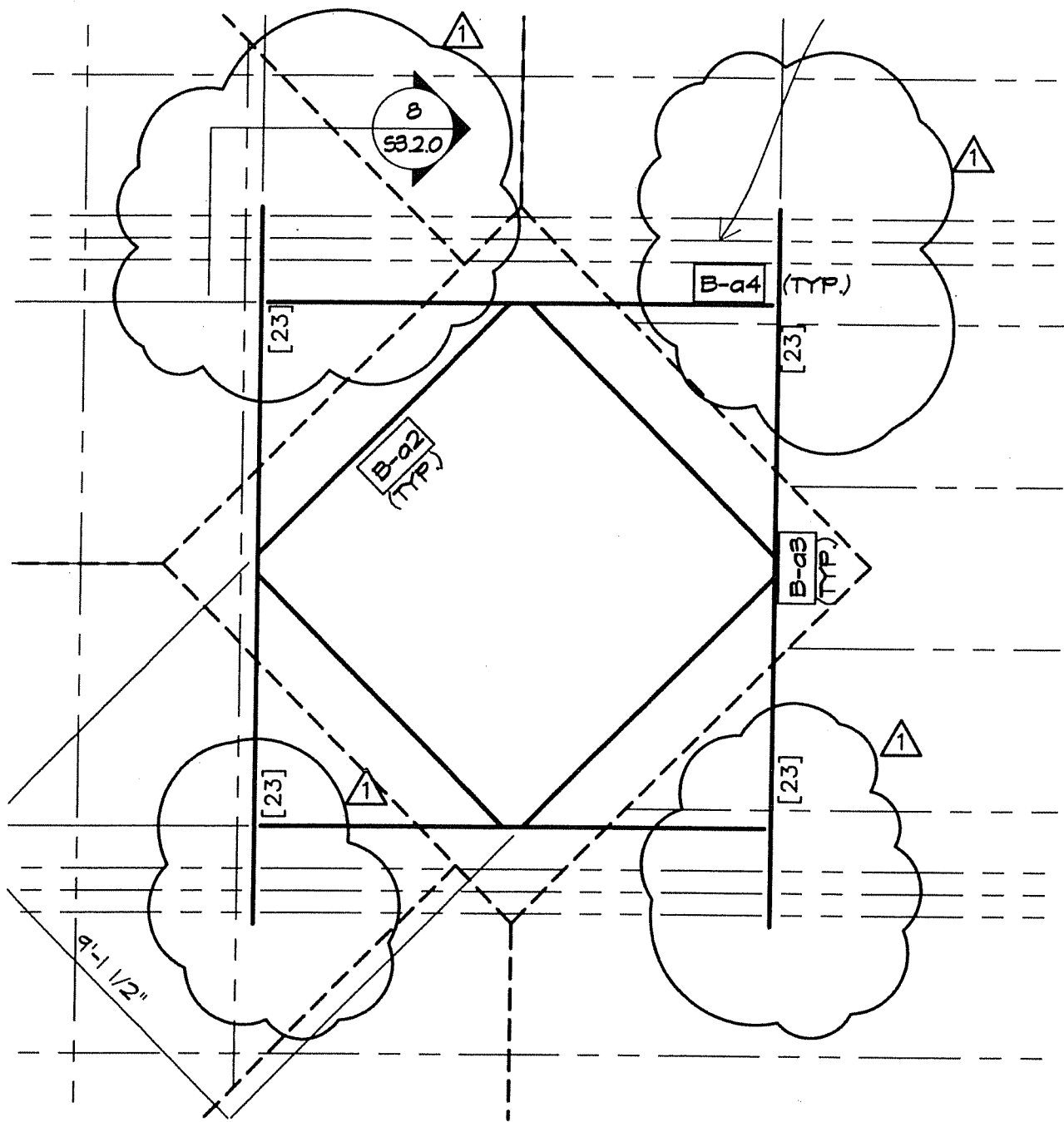
- 1. ROOF TRUSS SPACING 4'-0" (U.N.O.)
- 2. TOP OF BEAM ELEV. IS 12'-0" FROM FINISHED FLOOR U.N.O.
- 3. ROOF TRUSSES TO BE DESIGNED FOR SNOW LOADS INCLUDING UNBALANCED SNOW LOAD AND SNOW DRIFT (WHERE APPLICABLE PLUS ALL OTHER APPLICABLE LIVE LOADS INCLUDING WIND AND WIND UPLIFT.
- 4. ROOF DECK SHALL BE 1.5B22. (2-SPAN, MIN.)
- 5. REFER TO SO.1.0 FOR ADDITIONAL NOTES.
- 6. REFER TO ARCHITECTURAL DRAWINGS FOR ANY DIMENSIONS NOT SHOWN.
- 7. REFER TO FOUNDATION PLAN FOR COLUMN SCHEDULE.
- 8. [XX] INDICATES BEAM REACTION, IN KIPS.
- 9. ROOF JOIST/TRUSS MANUF. SHALL DESIGN BRIDGING ACCORDING TO AISI STANDARDS.

9. REFER TO S3.2.0 FOR TYPICAL FRAMING DETAILS. 

10. REFER TO S3.30 FOR ROOF TRUSS PROFILES.

REFER SHEET S2.c.1R

JOB NAME: RUBENSTEIN CENTER FOR YOUTH		DESCRIPTION: ADDENDUM NO. 1 4/20/06	
 ms consultants, inc. engineers, architects, planners 206 CAPITAL STREET, 4th FLOOR Charleston, West Virginia 25301 (304) 346-1211 Fax : (304) 346-1213	MS PROJECT NUMBER: 64-12545-00-II-I3-0308		SR-18
	SCALE: N.T.S.		



REFER SHEET S2.a.1R

JOB NAME:
RUBENSTEIN CENTER FOR YOUTH

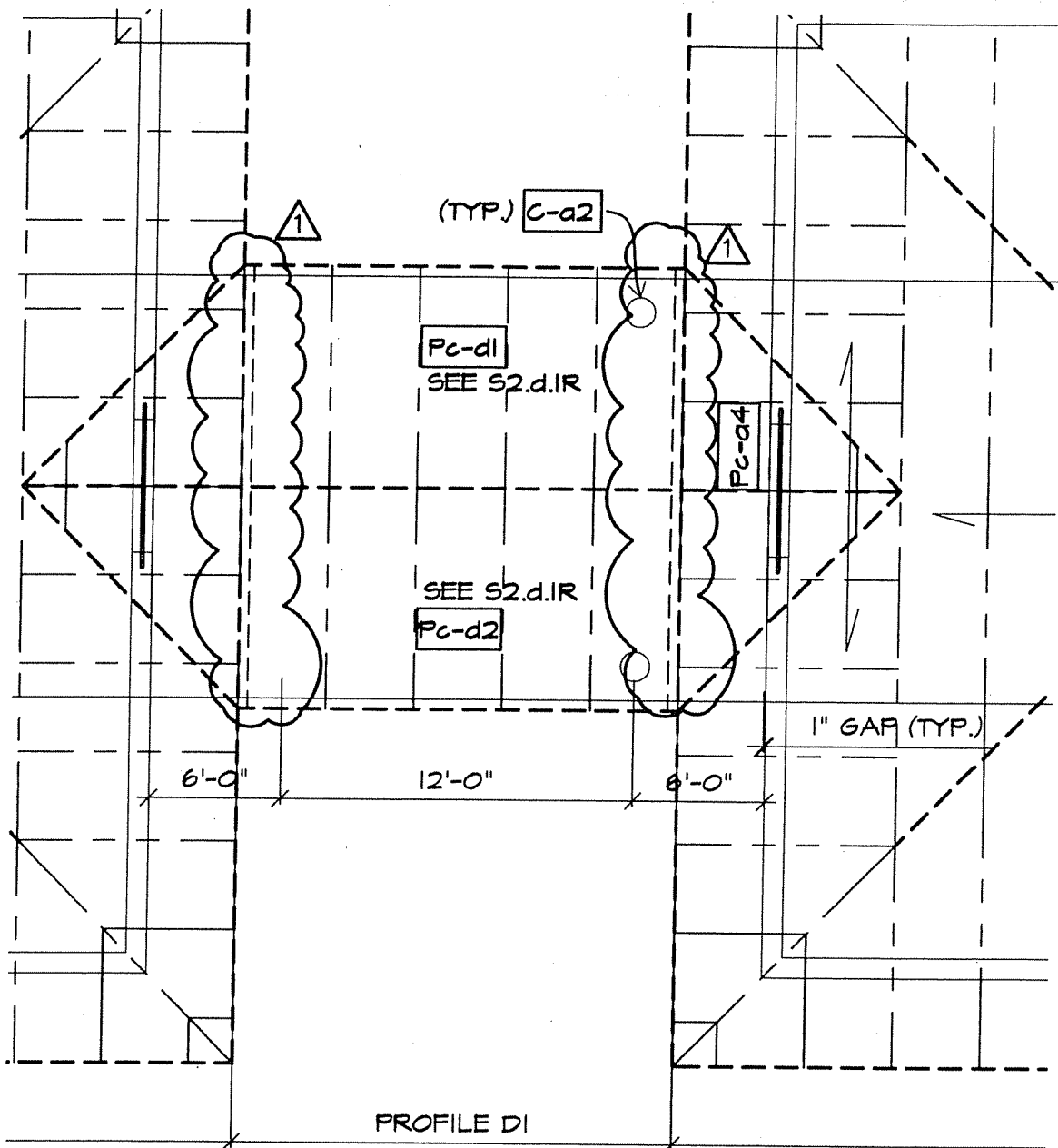
DESCRIPTION:
ADDENDUM NO. 1 4/20/06



ms consultants, inc.
 engineers, architects, planners
 206 CAPITAL STREET, 4th FLOOR
 Charleston, West Virginia 25301
 (304) 346-1211 Fax : (304) 346-1213

MS PROJECT NUMBER:
 64-12545-00-II-I3-0308
 SCALE:
 N.T.S.

SR-19



PROFILE D1

← ADMIN. TO COTTAGE A
OR COTTAGE B TO COTTAGE A →

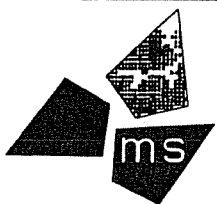
REFER SHEET S2.a.1R

JOB NAME:

RUBENSTEIN CENTER FOR YOUTH

DESCRIPTION:

ADDENDUM NO. 1 4/20/06



ms consultants, inc.
engineers, architects, planners

206 CAPITAL STREET, 4th FLOOR
Charleston, West Virginia 25301
(304) 346-1211 Fax : (304) 346-1213

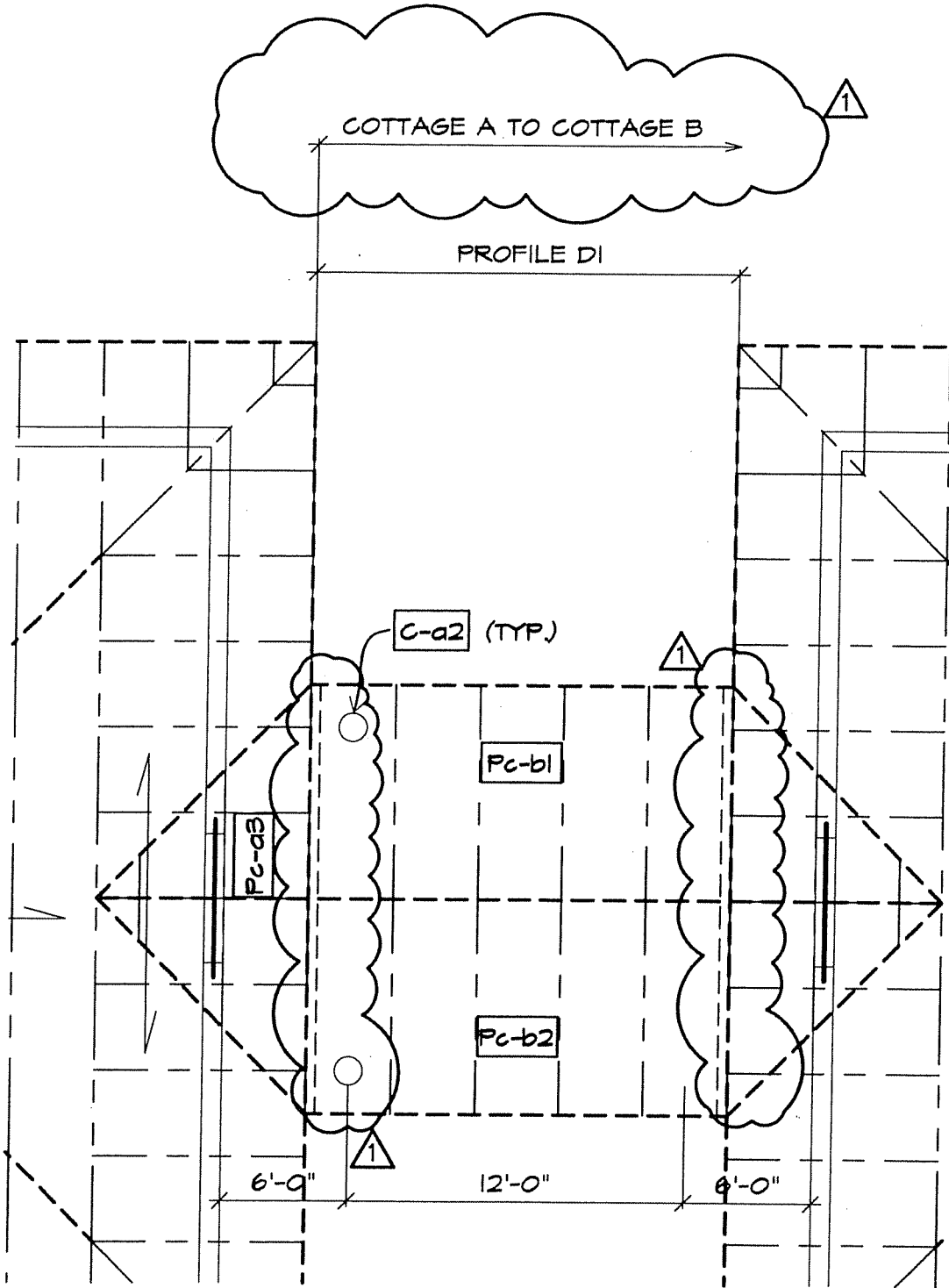
MS PROJECT NUMBER:

64-12545-00-II-13-0308

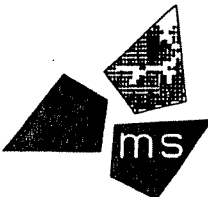
SCALE:

N.T.S.

SR-20



REFER SHEET S2.a.1R

JOB NAME: RUBENSTEIN CENTER FOR YOUTH		DESCRIPTION: ADDENDUM NO. 1 4/20/06	
 ms consultants, inc. engineers, architects, planners 206 CAPITAL STREET, 4th FLOOR Charleston, West Virginia 25301 (304) 346-1211 Fax : (304) 346-1213	MS PROJECT NUMBER: 64-12545-00-II-13-0308		SR-21
	SCALE: N.T.S.		

LEGEND

C-xx INDICATES COLUMN NUMBER
SEE FOUNDATION PLAN

B-xx BEAM, SEE SCHEDULE

PC-xx PRECAST BEAM, SEE SCHEDULE

I STEEL COLUMN

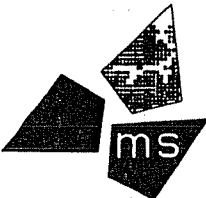
CONCR. COLUMN

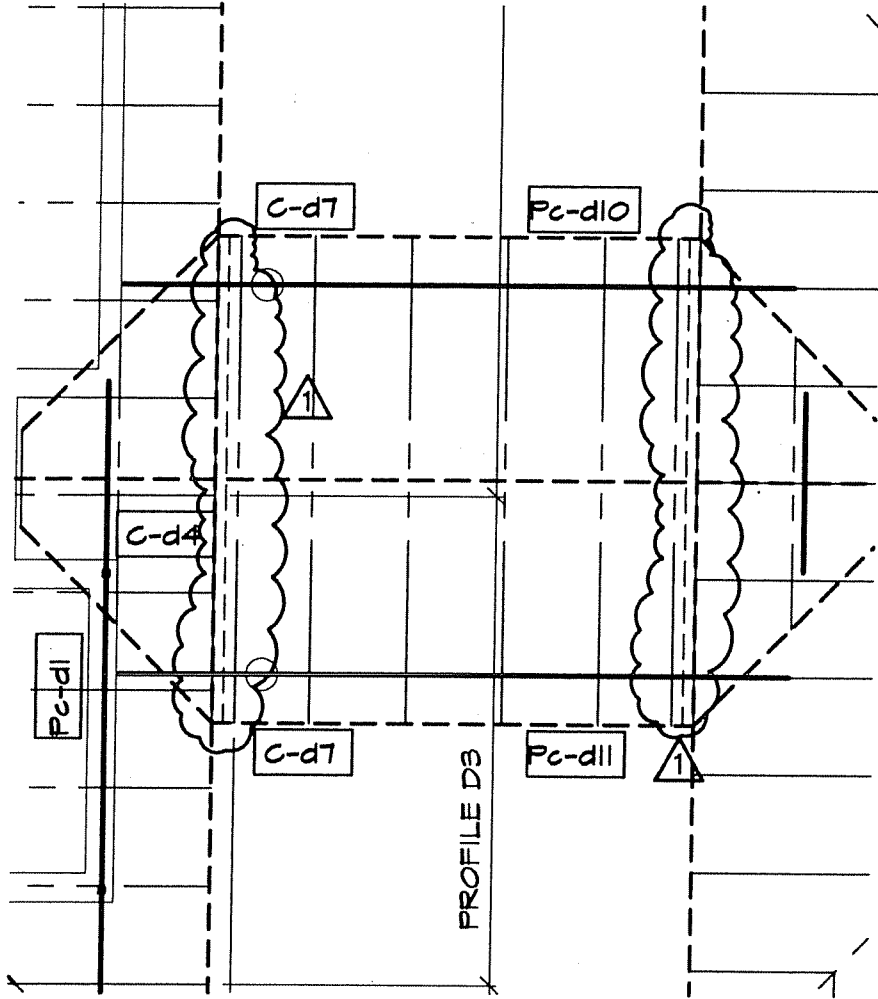
← ROOF DECK

--- EXPANSION JOINT (ROOF)
SEE DETAIL 12/S3.2.0

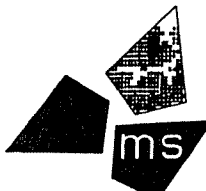


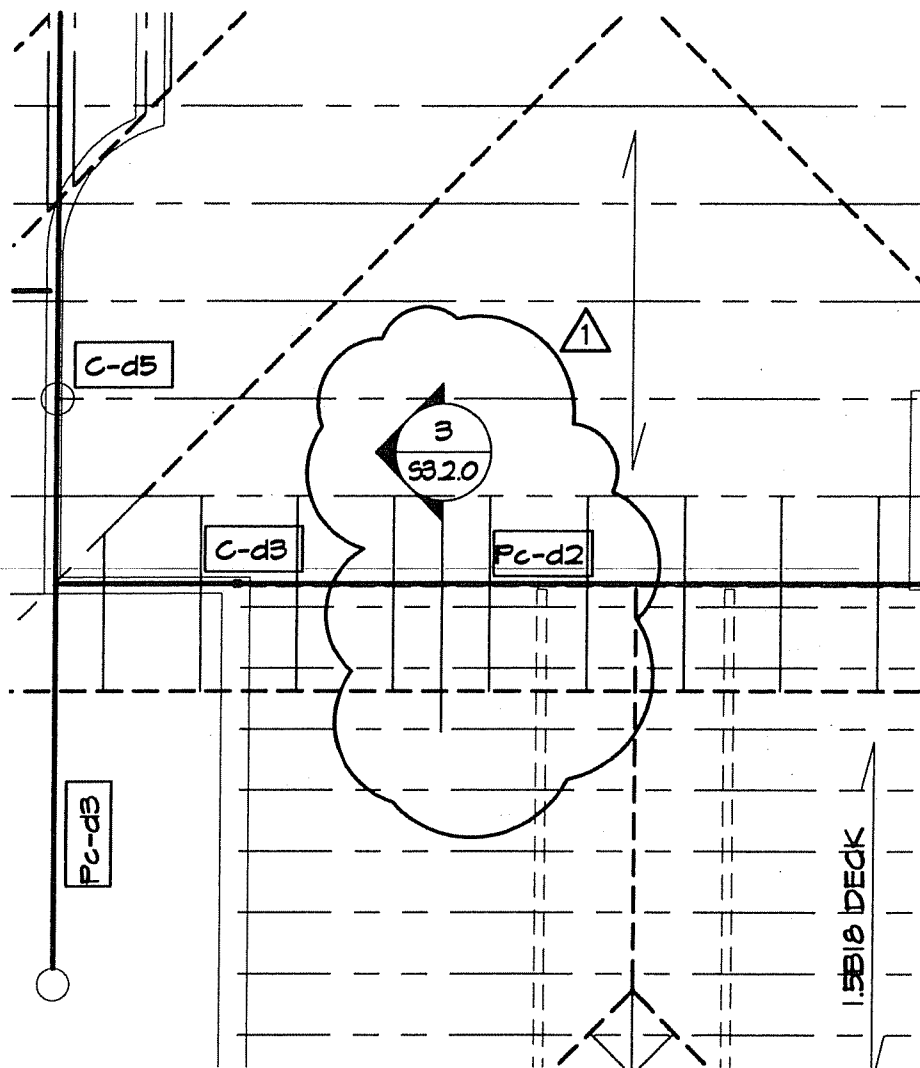
REFER SHEET S2.a.1R

JOB NAME: RUBENSTEIN CENTER FOR YOUTH		DESCRIPTION: ADDENDUM NO. 1 4/20/06	
 <p>ms consultants, inc. engineers, architects, planners</p> <p>206 CAPITAL STREET, 4th FLOOR Charleston, West Virginia 25301 (304) 346-1211 Fax : (304) 346-1213</p>	MS PROJECT NUMBER: 64-12545-00-II-I3-0308		SR-22
	SCALE: N.T.S.		

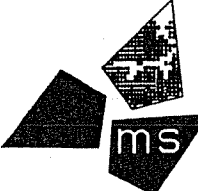


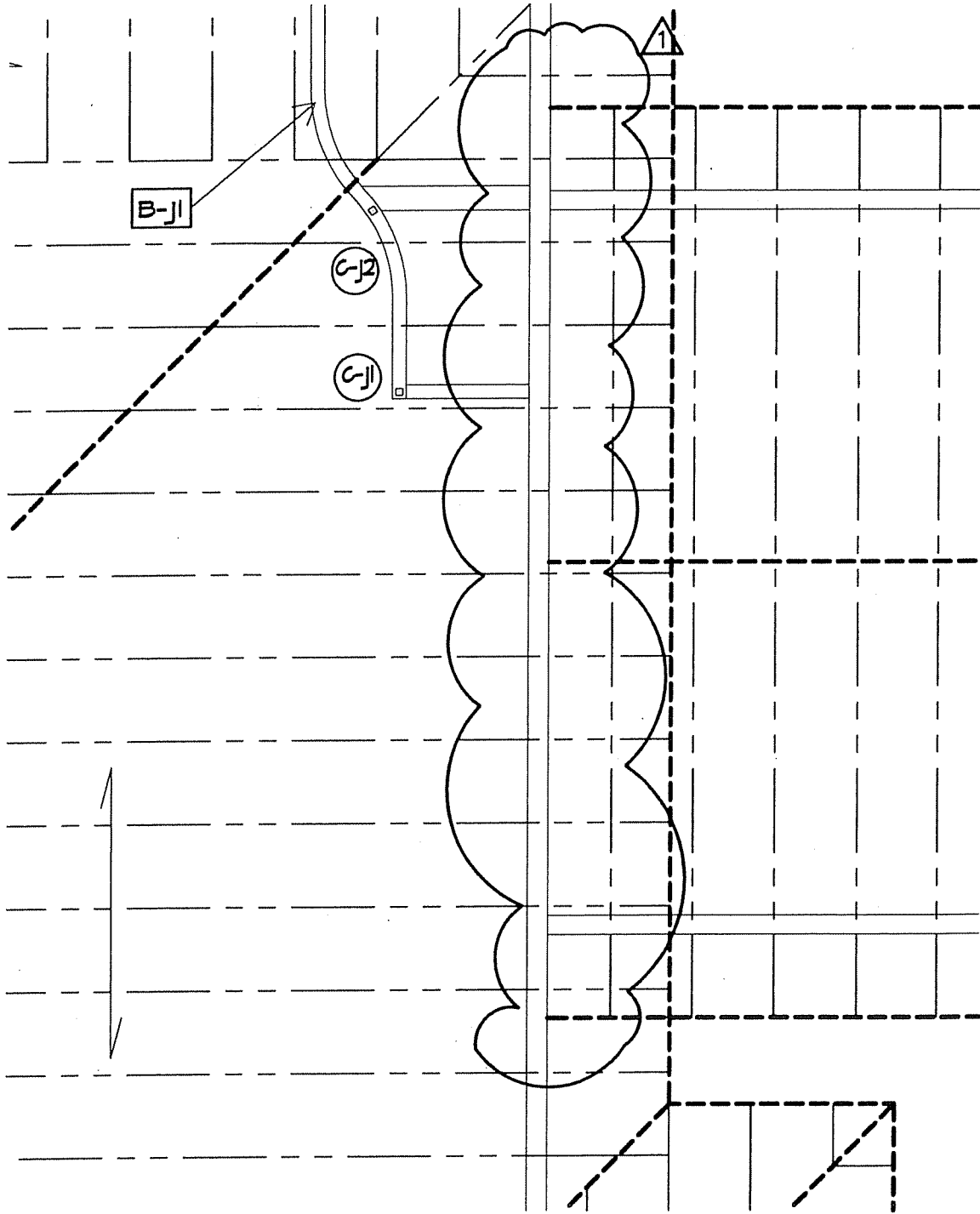
REFER SHEET S2.d.1R

JOB NAME: RUBENSTEIN CENTER FOR YOUTH		DESCRIPTION: ADDENDUM NO. 1 4/20/06	
 ms consultants, inc. engineers, architects, planners 206 CAPITAL STREET, 4th FLOOR Charleston, West Virginia 25301 (304) 346-1211 Fax : (304) 346-1213	MS PROJECT NUMBER: 64-12545-00-II-I3-0308	SR-23	
	SCALE: N.T.S.		



REFER SHEET S2.d.1R

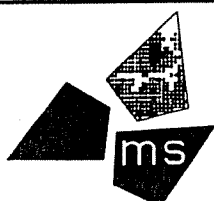
JOB NAME: RUBENSTEIN CENTER FOR YOUTH		DESCRIPTION: ADDENDUM NO. 1 4/20/06	
 ms consultants, inc. engineers, architects, planners 206 CAPITAL STREET, 4th FLOOR Charleston, West Virginia 25301 (304) 346-1211 Fax : (304) 346-1213	MS PROJECT NUMBER: 64-12545-00-II-I3-0308		SR-24
	SCALE: N.T.S.		



REFER SHEET S2.j.1R

JOB NAME:
RUBENSTEIN CENTER FOR YOUTH

DESCRIPTION:
ADDENDUM NO. 1 4/20/06



ms consultants, inc.
 engineers, architects, planners
 206 CAPITAL STREET, 4th FLOOR
 Charleston, West Virginia 25301
 (304) 346-1211 Fax : (304) 346-1213

MS PROJECT NUMBER:
 64-12545-00-II-13-0308
 SCALE:
 N.T.S.

SR-25

LEGEND

C-xx

INDICATES COLUMN NUMBER
SEE FOUNDATION PLAN

B-xx

BEAM, SEE SCHEDULE

PC-xx

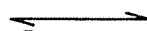
PRECAST BEAM, SEE SCHEDULE

□ I

STEEL COLUMN

○

CONCR. COLUMN



ROOF DECK



EXPANSION JOINT (ROOF)
SEE DETAIL II/S3.2.0



9. ROOF JOIST/TRUSS MANUF. SHALL DESIGN BRIDGING ACCORDING TO AISI STANDARDS.



10. REFER TO S3.2.0 FOR TYPICAL FRAMING DETAILS.

11. REFER TO S3.30 FOR ROOF TRUSS PROFILES.

12. ROOF TRUSSES IN GYM AREA SHALL BE DESIGNED TO SUPPORT BASKETBALL GOALS. REFER TO ARCHITECTURAL PLANS FOR ADDITIONAL INFORMATION.

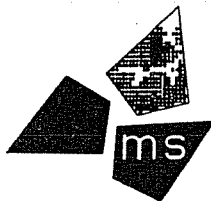
REFER SHEET S2.j.1R

JOB NAME:

RUBENSTEIN CENTER FOR YOUTH

DESCRIPTION:

ADDENDUM NO. 1 4/20/06



ms consultants, inc.
engineers, architects, planners

206 CAPITAL STREET, 4th FLOOR
Charleston, West Virginia 25301
(304) 346-1211 Fax : (304) 346-1213

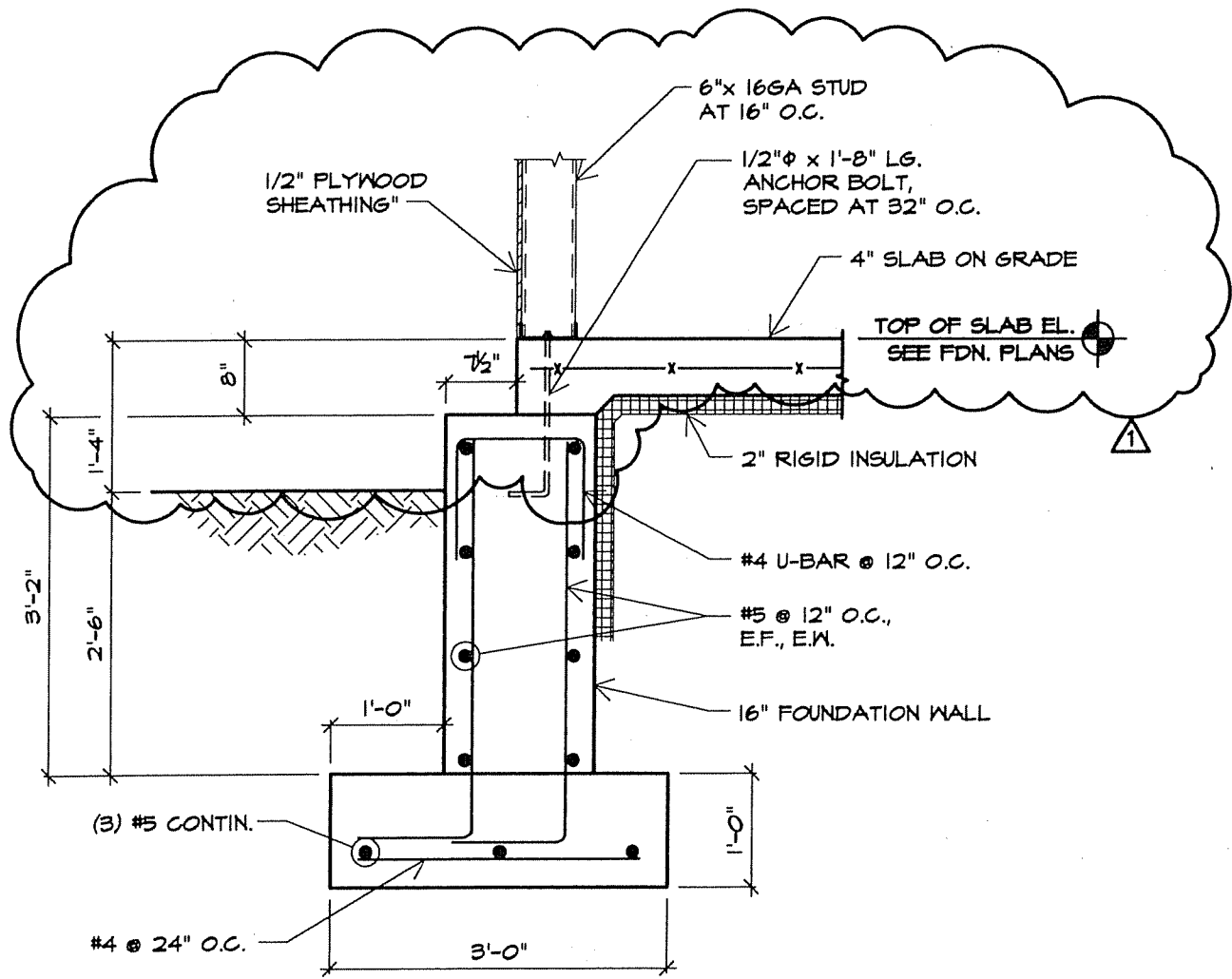
MS PROJECT NUMBER:

64-12545-00-II-I3-0308

SCALE:

N.T.S.

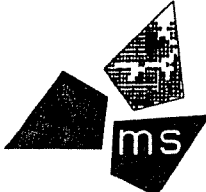
SR-26

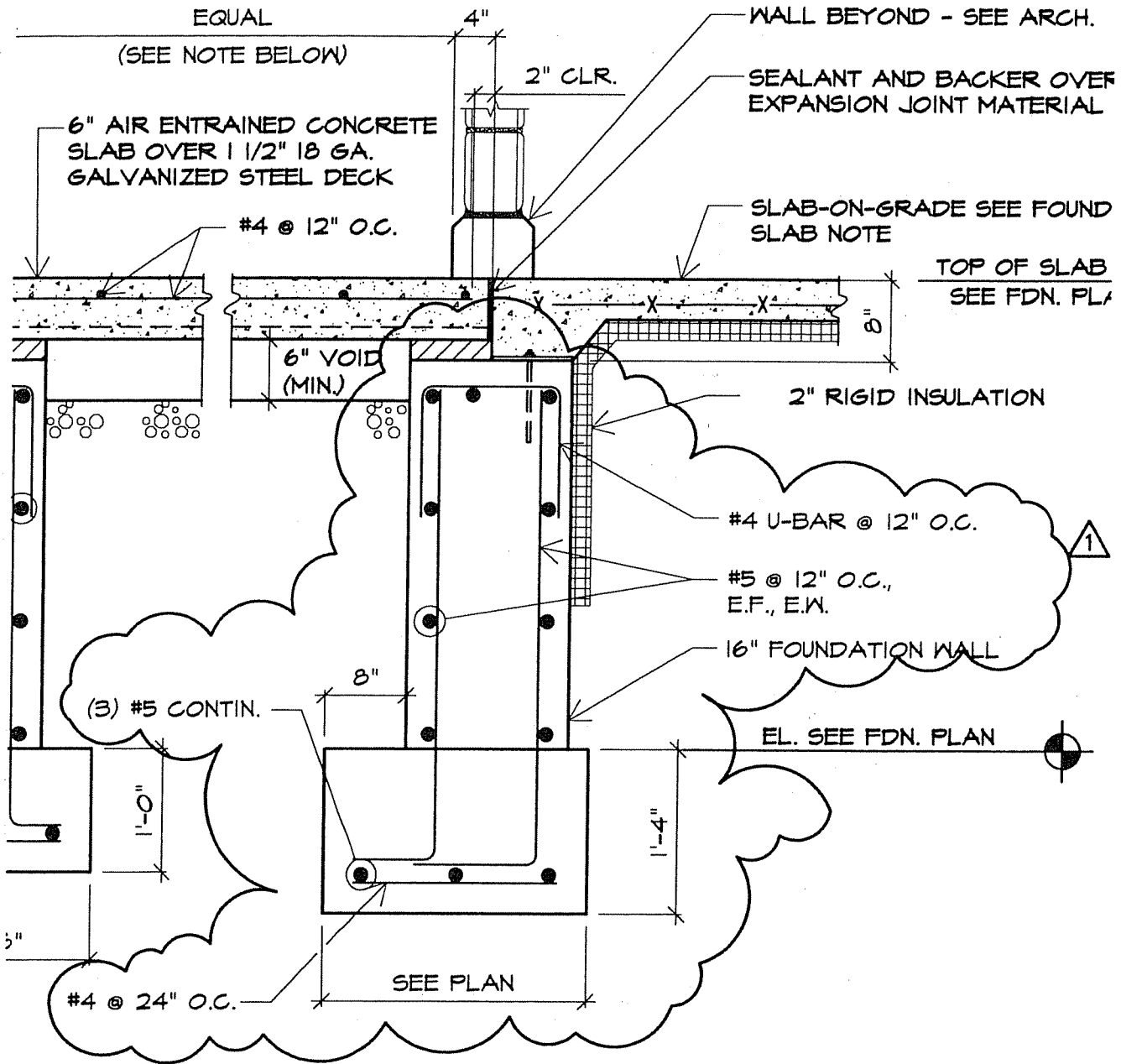


TYP. METAL STUD WALL FOOTING

4

REFER SHEET S3.0.0

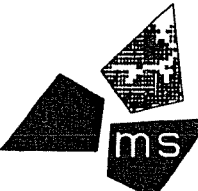
JOB NAME: RUBENSTEIN CENTER FOR YOUTH		DESCRIPTION: ADDENDUM NO. 1 4/20/06	
 ms consultants, inc. engineers, architects, planners 206 CAPITAL STREET, 4th FLOOR Charleston, West Virginia 25301 (304) 346-1211 Fax : (304) 346-1213	MS PROJECT NUMBER: 64-12545-00-II-13-0308		SR-27
	SCALE: N.T.S.		

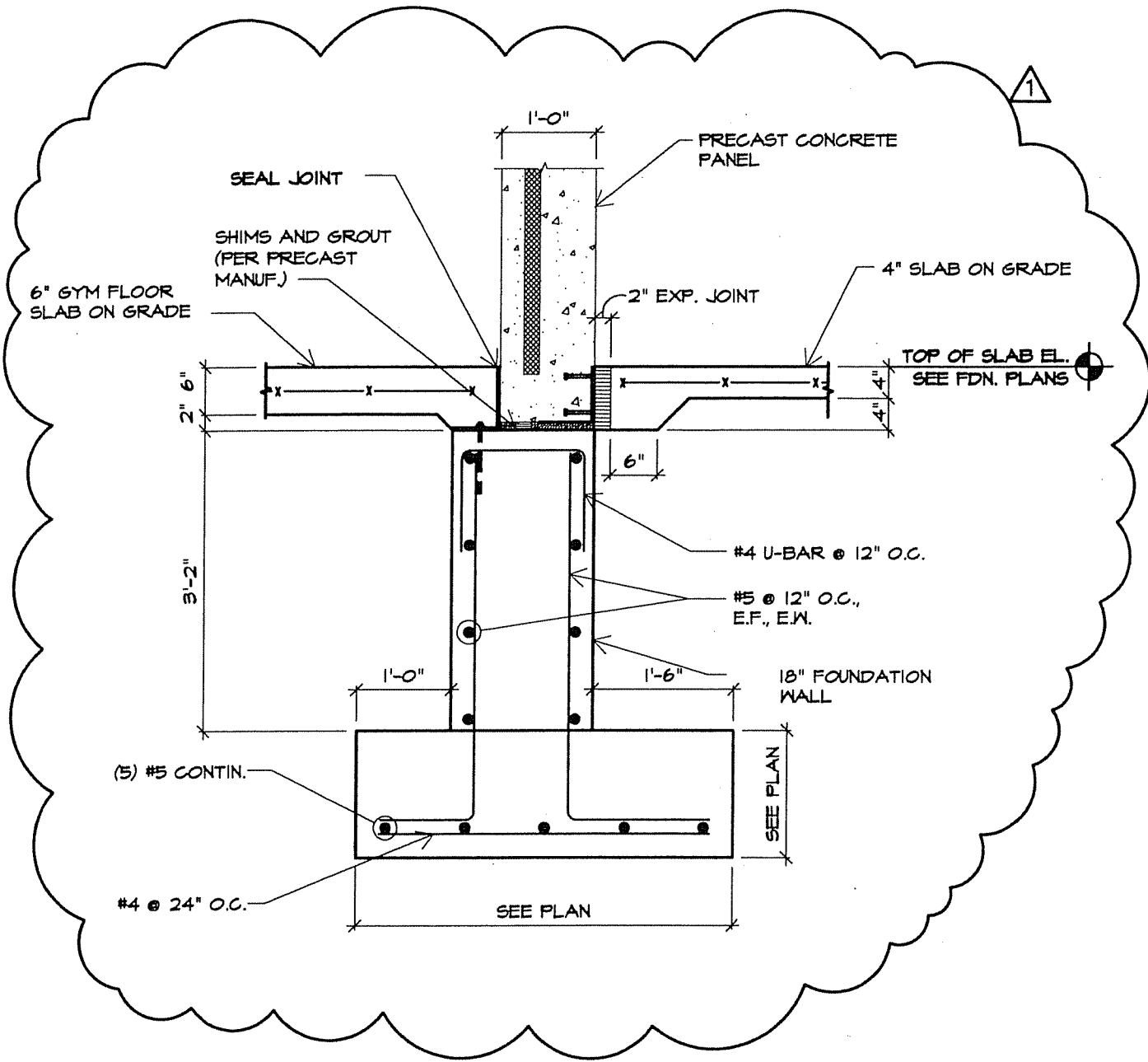


FROST PIT AT GLASS BLOCK WALL

2

REFER SHEET S3.1.0

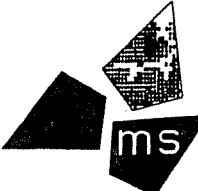
JOB NAME: RUBENSTEIN CENTER FOR YOUTH		DESCRIPTION: ADDENDUM NO. 1 4/20/06	
 <p>ms consultants, inc. engineers, architects, planners 206 CAPITAL STREET, 4th FLOOR Charleston, West Virginia 25301 (304) 346-1211 Fax : (304) 346-1213</p>	MS PROJECT NUMBER: 64-12545-00-II-I3-0308		SR-28
	SCALE: N.T.S.		

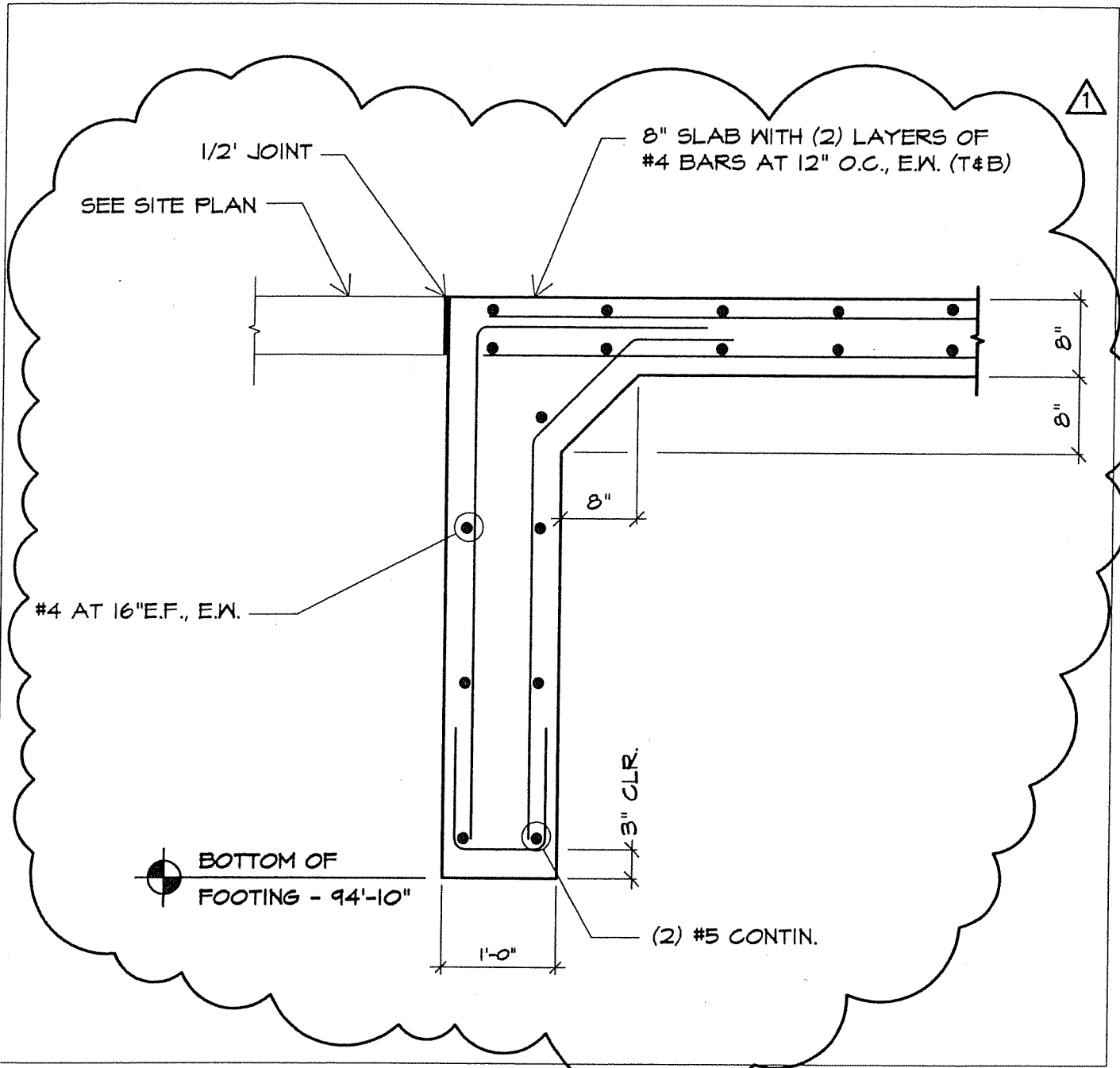


EXPANSION JOINT AT WALL

3

REFER SHEET S3.1.0

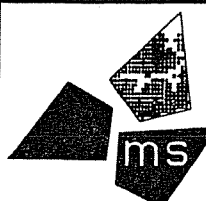
JOB NAME: RUBENSTEIN CENTER FOR YOUTH		DESCRIPTION: ADDENDUM NO. 1 4/20/06	
 ms consultants, inc. engineers, architects, planners 206 CAPITAL STREET, 4th FLOOR Charleston, West Virginia 25301 (304) 346-1211 Fax : (304) 346-1213	MS PROJECT NUMBER: 64-12545-00-II-I3-0308		SR-29
	SCALE: N.T.S.		

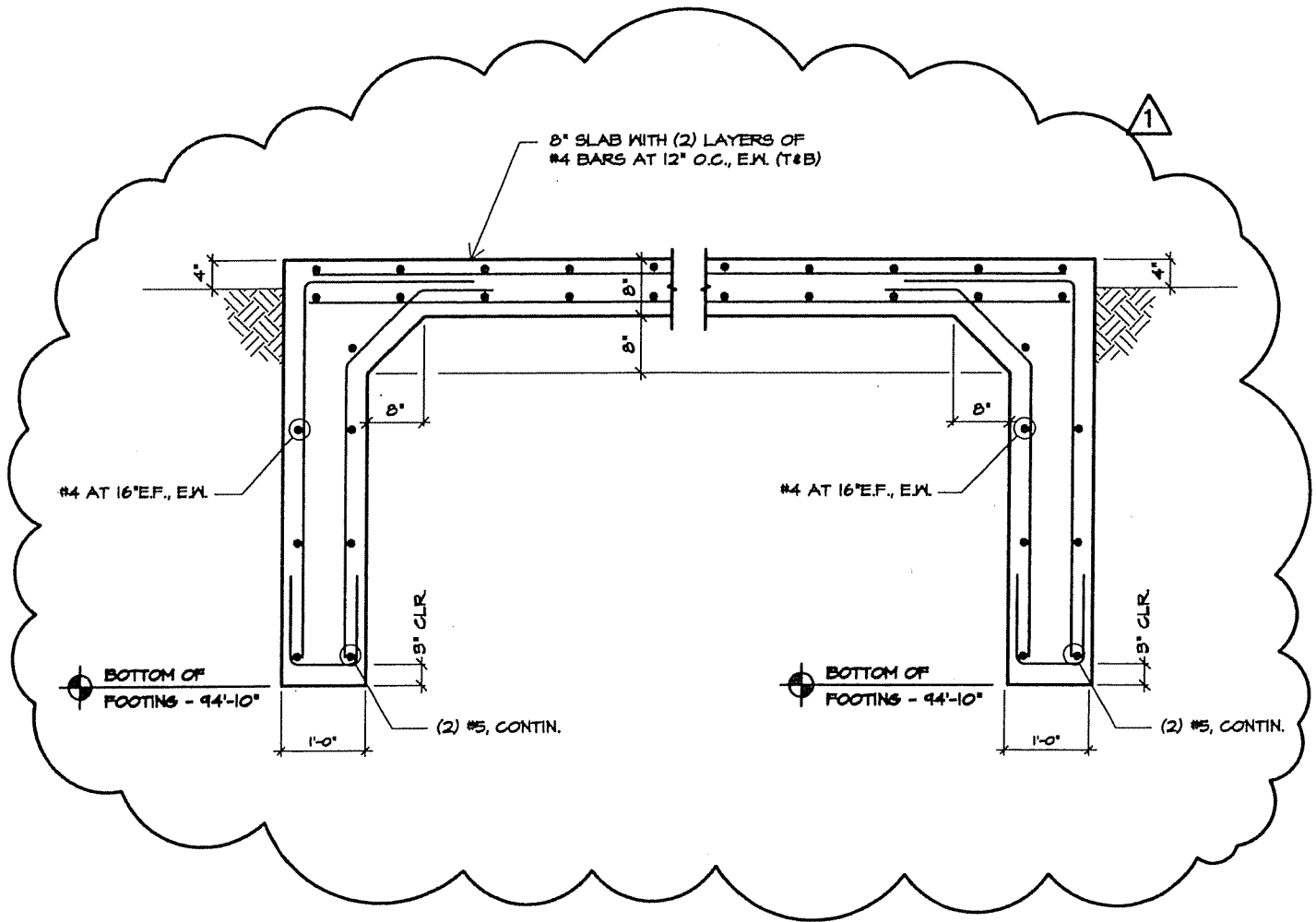


TURN-DOWN SLAB AT VOCATIONAL SHOPS

4

REFER SHEET S3.1.0

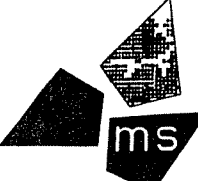
JOB NAME: RUBENSTEIN CENTER FOR YOUTH		DESCRIPTION: ADDENDUM NO. 1 4/20/06	
 <p>ms consultants, inc. engineers, architects, planners 206 CAPITAL STREET, 4th FLOOR Charleston, West Virginia 25301 (304) 346-1211 Fax : (304) 346-1213</p>	MS PROJECT NUMBER: 64-12545-00-II-I3-0308		SR-30
	SCALE: N.T.S.		

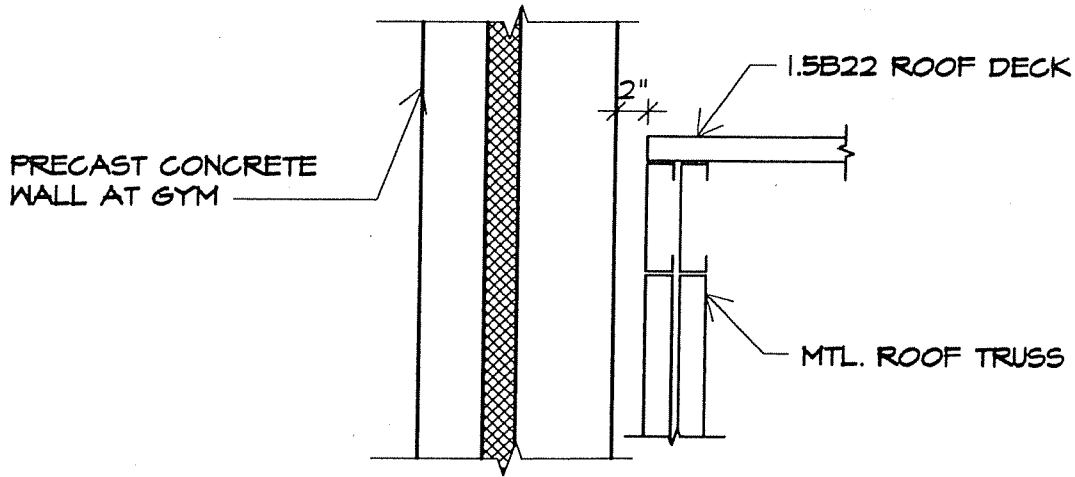


TURN-DOWN SLAB AT EQUIPMENT

5

REFER SHEET S3.1.0

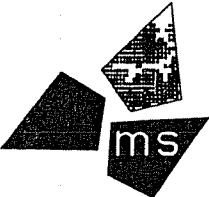
JOB NAME: RUBENSTEIN CENTER FOR YOUTH		DESCRIPTION: ADDENDUM NO. 1 4/20/06	
 ms consultants, inc. engineers, architects, planners 206 CAPITAL STREET, 4th FLOOR Charleston, West Virginia 25301 (304) 346-1211 Fax : (304) 346-1213	MS PROJECT NUMBER: 64-12545-00-II-13-0308		SR-31
	SCALE: N.T.S.		

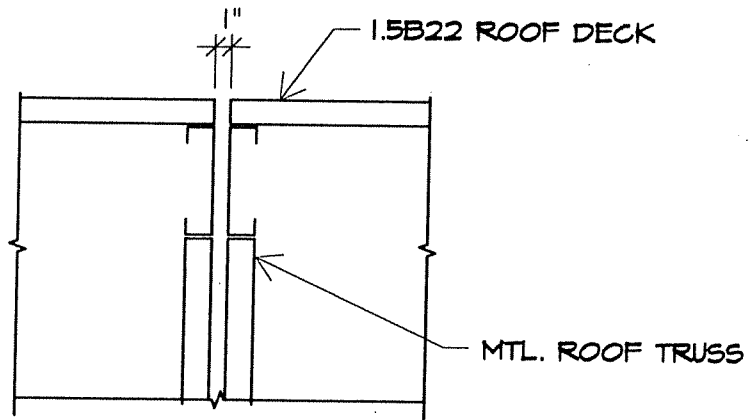


EXPANSION JOINT AT ROOF AND WALL



REFER SHEET S3.2.0

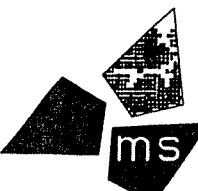
JOB NAME: RUBENSTEIN CENTER FOR YOUTH		DESCRIPTION: ADDENDUM NO. 1 4/20/06	
 ms consultants, inc. engineers, architects, planners 206 CAPITAL STREET, 4th FLOOR Charleston, West Virginia 25301 (304) 346-1211 Fax : (304) 346-1213	MS PROJECT NUMBER: 64-12545-00-II-I3-0308		SR-32
	SCALE: N.T.S.		

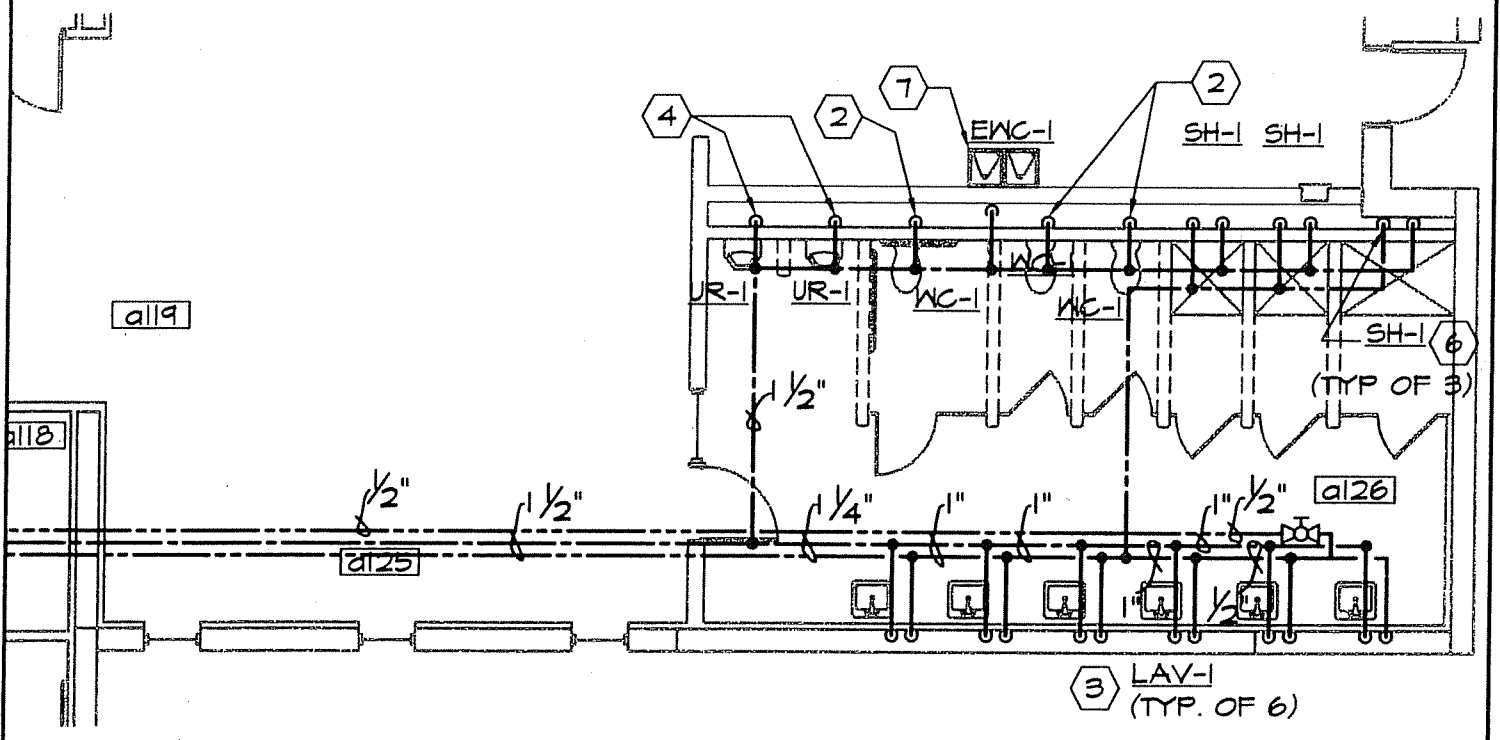
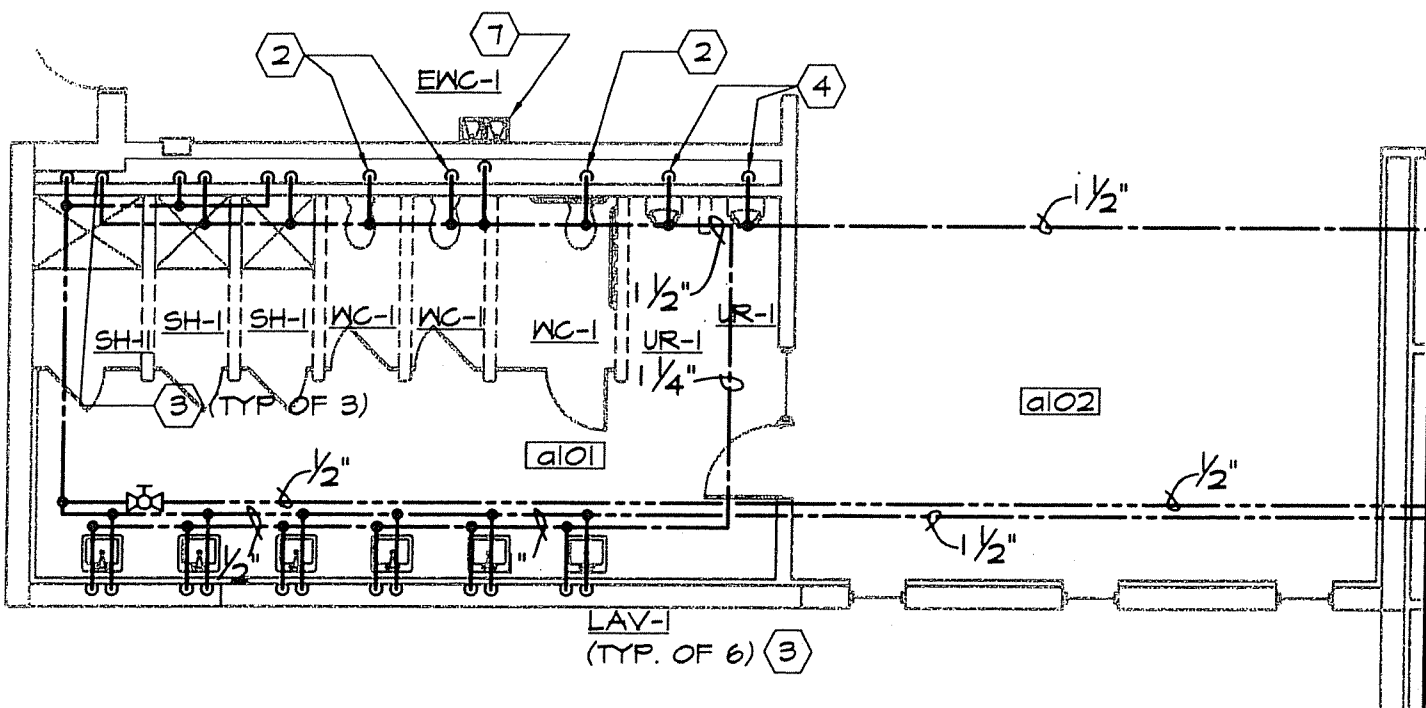


EXPANSION JOINT AT ROOF

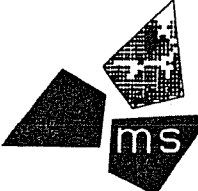
12

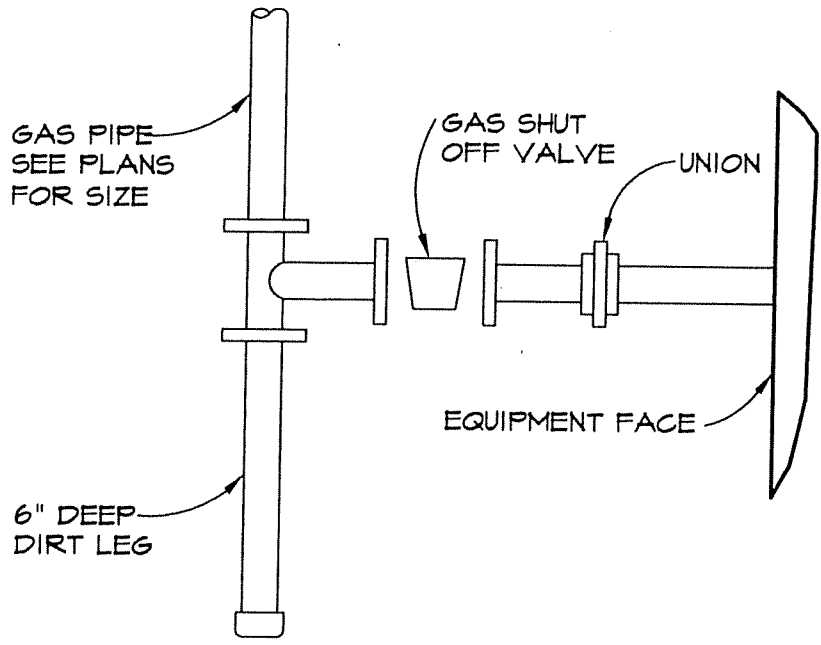
REFER SHEET S3.2.0

JOB NAME: RUBENSTEIN CENTER FOR YOUTH		DESCRIPTION: ADDENDUM NO. 1 4/20/06	
 <p>ms consultants, inc. engineers, architects, planners 206 CAPITAL STREET, 4th FLOOR Charleston, West Virginia 25301 (304) 346-1211 Fax : (304) 346-1213</p>	MS PROJECT NUMBER: 64-12545-00-II-I3-0308		SR-33
	SCALE: N.T.S.		



REFER SHEET P2.a.1

JOB NAME: RUBENSTEIN CENTER FOR YOUTH		DESCRIPTION: ADDENDUM NO. 1 4/20/06	
 ms consultants, inc. engineers, architects, planners 206 CAPITAL STREET, 4th FLOOR Charleston, West Virginia 25301 (304) 346-1211 Fax : (304) 346-1213	MS PROJECT NUMBER: 64-12545-00-II-13-0316		PR-1
	SCALE: N.T.S.		



GAS PIPE CONNECTIONS

NTS

A
P4.a.1

REFER SHEET P4.a.1

JOB NAME: RUBENSTEIN CENTER FOR YOUTH	DESCRIPTION: ADDENDUM NO. 1 4/20/06	
ms consultants, inc. engineers, architects, planners 206 CAPITAL STREET, 4th FLOOR Charleston, West Virginia 25301 (304) 346-1211 Fax : (304) 346-1213	MS PROJECT NUMBER: 64-12545-00-II-I3-0316	PR-2
	SCALE: N.T.S.	

SECTION 07226

VENTED NAILBOARD INSULATION SYSTEM

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Vented nailboard insulation system for roof shingle nailbase.

1.2 SUMMARY

- A. Provide labor materials, and equipment necessary for complete installation of nailboard insulation system for shingle nailbase as indicated.
- B. Related Work Specified Elsewhere:
 - 1. Section 05312 - Steel Roof Deck.
 - 2. Section 06112 - Framing and Sheathing.
 - 3. Section 07311 - Asphalt Shingles.
 - 4. Section 07410 - Standing Seam Metal Roof Panels.

1.3 SYSTEM DESCRIPTION

- A. Description of System
 - 1. Ventilated roof insulation shall be a factory-assembled panel consisting of a minimum 7/16-inch oriented strand board top surface, built in ventilation space and isocyanurate insulation. Insulation shall be 3.5-inch thick polyisocyanurate with a minimum R-value of 20.
 - 2. Total system thickness 5.0 inches.
 - 3. Panels shall be nominal 4 feet by 8 feet and the edges shall be accurately machined after assembly. Edges shall be rabbetted to allow clearance between the wood on adjoining panels.
- B. Performance Requirements
 - 1. The spacer blocks within the ventilation space shall not exceed 10 percent of the panel area and will allow air to flow both up the slope and horizontally. The air space shall provide a minimum of 9 square inches net free area per lineal foot of insulation.
 - 2. The oriented strand board top surface shall not exceed its APA span rating based on the spacing of the spacer blocks.

1.4 SUBMITTALS

- A. Submit in accordance with Section 01330.
- B. Product Data: Complete manufacturer's product literature and installation instructions for vented nailboard insulation system.
- C. Certification: Letter certifying approval of vented nailboard insulation system by approved shingle manufacturer.

1.5 QUALITY ASSURANCE

- A. The insulation shall meet the physical properties specified in ASTM C-591-85 and shall be certified to comply with FM 4450 or UL 1256. The use of aged R-values based on PIMA Bulletin #101 are not acceptable.
 - 1. R-value of system: 20 minimum.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver insulation system with manufacturer's original packaging labels intact and legible.
- B. Insulation must be kept dry at all times. Wet insulation shall be immediately removed from site.
- C. If stored outside, raise insulation above ground or roof level on pallets and cover with a tarpaulin or other waterproof material. Plastic wrapping installed at the factory should not be used as outside storage covers.

1.7 PROJECT CONDITIONS

- A. Roof surface shall be free of ponded water, snow, or ice.
- B. Install no more insulation in one day than can be covered the same day with underlayment or membrane flashing.
- C. Do not expose insulation to excessive heat, sparks, or open flame.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Product of the following manufacturers will be considered, providing their products equal or exceed the quality specified; and they can provide products of the type, size, function and arrangement required:
 - 1. "Celo-Vent Insulation Shingle Deck": Celotex Corp., Tampa, Florida.
 - 2. "Cool-Vent": Hunter.
 - 3. "Vent-Top ThermaCal 1": Cornell Corporation.
 - 4. "Venting Nail Line": Apache.
 - 5. Proposed Equals: In accordance with Instructions to Bidders.

2.2 MATERIALS

- A. Oriented Strand Board (OSB): Shall conform to APA rated sheathing standard PRP 108, Exposure 1 and HUD/FHA-918 and the following properties:

PROPERTY	SPECIFICATION
Density	40 lbs./cu.ft.
Modulus of Rupture	25,000 psi
Modulus of Elasticity	450,000 psi
Internal Bond	50 psi
Linear Expansion	0.15 percent
Direct Nail Withdrawl (Ring Shank)	95 lbs. (average)

- B. Insulation shall conform to the following minimum physical properties:

PROPERTY	TEST METHOD	SPECIFICATIONS
Thermal Performance	ASTM C518	As required
Water Absorption Percent Volume	ASTM C209	>1 percent
Dimensional Stability	ASTM D2126	2 percent max.
Compressive Strength	ASTM D1621	18 psi (nominal)
Foam Core Density	ASTM D1622	2.0 lbs./cu.ft. (nominal)
Moisture Vapor Transmission	ASTM E96	<1 perm inch
Service Temperature	-----	-100°F to 250°F
Flame Spread	ASTM E84	<25

2.3 RELATED MATERIALS

- A. Preservative-treated perimeter wood blocking equal in thickness to the nailboard installed.
- B. Mechanical Fasteners: Factory Mutual approved corrosion resistant insulation fasteners or appropriate length to penetrate the substrate to a depth specified by the fastener manufacturer.

PART 3 EXECUTION

3.1 PREPARATION

- A. Contractor shall be responsible for providing proper substrate to receive insulation and roofing system. Vented nailboard must be installed on a clean dry structural deck. Any element of the roof system that becomes wet during construction must be allowed to dry thoroughly or be replaced before roof assembly is completed.
- B. Contractor shall verify that work done under other sections meet the following:
1. Roof curbs, nailers, equipment supports, vents, and other items penetrating the roof area properly attached to substrate and are otherwise properly prepared.

3.2 INSTALLATION

- A. Comply with insulation manufacturer's instructions and recommendations for the handling, installation, fastener layout, anchorage or insulation to substrate.

END OF SECTION